TECHNOLOGY DEPARTMENT

Member Associated Business Papers, Inc.

The Newspaper of the Industry

Member Audit Bureau of Circulations.

AIR CONDITIONING AND REFRIGERATION News

Issued Every Monday at 450 W. Fort St., Detroit 26, Mich.

April 12, 1948

Vol. 53, No. 15, Serial No. 395

Established 1926

Reentered as second-class matter October 3, 1936 at the post office at Detroit, Michigan, under the Act of March 3, 1879. Trade Mark Registered U. S. Patent Office. Copyright, 1948, by Business News Publishing Co.

PUBLIC LIBRARY APR 13 1948 DETROIT

INSIDE DOPE

by GEORGE F. TAUBENECK

Gag of the Week
Readers Don't All Agree
Why Do People Fall for Communism?
Who Are You, Anyway?
Mass Selfishness
Why Planning Isn't Democratic
Why Planning Leads To Emotional Insecurity
Why Planning Leads To Economic Insecurity
Why Planning Leads to Stagnation
Why Planning Is Bad News for Small Business
Why Planning Is Antagonistic to Christianity
Why Planning Destroys The Highest Instincts
How to Breed Juvenile Delinquents
The Procrustean Bed

Gag of the Week

T. Harry Thompson enjoys showing to intimate friends a clipping of an advertisement which appeared in a certain New York newspaper. It was an advertisement inserted by a luggage firm, and its headline says, so help us:

"Will your old bag do for the weekend?"

Readers Don't All Agree

And that reminds us of a reaction which many subscribers to the NEWS often have after they've read an "Inside Dope" column devoted to politics and economics.

"I agree with you," they'll say. "But doesn't everybody else who subscribes to the NEWS?"

No, they don't.

Subscribers to AIR CONDITIONING & REFRIGERATION NEWS range from top manufacturing executives through distributors, dealers, and servicemen down to novice students. Subscribers are located all over the Earth—from Russia to Zamboanga. Thousands of them are union members; many thousands voted for FDR, dozens are probably Communists; and every week a dozen or so drop or cancel their subscriptions because they resent the tone and logic of "Inside Dope."

(See "Off the Chest" letters on page 12.)

One cancel-my-subscription reader wrote us recently: "Hasn't Taubeneck been poisoned yet?"

Happily, we're still alive and kicking. And we intend to "hammer on this line if it takes all summer." (Quoting General U. S. Grant.) Read on:

Why Do People Fall for Communism?

Over and over again we have heard honestly perplexed Americans wonder:

"Why do people fall for this stuff? Why do they go for Planning? Why do they imagine there might be something in Socialism for them?"

Most difficult to figure out is why any son of Adam would worship the Communist Religion.

Perhaps one explanation is the fact that mental diseases are on the upswing everywhere. As the world becomes more complex, many a man can't stand the gaff—or thinks he can't. Communism—and its milder progenitors, Planning and Socialism—appear to offer him a species of "security." They flatter his vanity, because they blame a System for his discontent. And once he has embraced them, they give him a sense of doing something useful and purposeful.

He *belongs*. (He thinks.)

(Continued on Page 16, Column 1)

Big Exit from Field by Dealers?

NERA Says Many 'Sideline' Outlets Are Quitting Appliances, But Another Study Shows Few Leaving

* * *

PITTSBURGH—Appliance dealers are not falling by the wayside in any great numbers in the areas of northern and western Pennsylvania served by the West Penn Power Co.—an area which does not include any metropolitan centers, but is dotted with numerous smaller cities and towns.

In fact, of the nearly 1,000 dealers who sell to the some 230,000 domestic meters served by West Penn Power, probably not more than 25 took down their signs in the last 12 months. And in some cases, the stores didn't actually close up, but were purchased by another dealer and operated as a branch or part of a chain.

West Penn Power doesn't merchandise appliances. But its dealer department, under the direction of T. G. Allan, does one of the outstanding jobs in the country in promoting sales through dealers and in assisting the dealers in the matter of doing a better job. In this close relationship with the dealers, West Penn Power is enabled to make some close studies of trends in appliance distribution.

The utility's records show that prior to the War some 780 dealers in its territory handled major appliances. At the beginning of 1947, between 950 and 1,000 outlets were handling the majors. As noted above, there are probably only slightly fewer than that in the business now.

Information compiled by the company also seemed to indicate that the specialty appliance dealer, while now in the minority in terms of the total number of dealers, still does a better sales job than the other types of outlets selling appliances.

West Penn Power classifies the dealers in its territory—by percentage of the total number—as follows:

Specialty Dealers	19.7%
Furniture Stores	13.9%
Farm Equipment	10.0%
Industrial Chains	9.4%
Hardware Stores	9.3%
Automotive Supply	5.8%
Plumbing & Heating	4.8%
Electric Service	4.5%
Variety Stores	4.4%
Electric Contractors	3.5%
General Stores	3.1%
Department Stores	2.0%
Chain Department	2.0%
All Others	7.6%

An analysis of nearly 80% of the 5,000 electric water heater sales made last year in the areas served by West Penn showed how the various categories of appliance outlets split this business:

Specialty Dealers	32.9%
Chain Department	11.4%
Furniture Stores	10.1%
Plumbing and Heating	10.0%
Hardware Stores	7.4%
Farm Equipment	5.2%
Automotive Stores	4.1%
Industrial Chains	3.9%
Department Stores	3.7%
Contractors	3.6%
Miscellaneous	3.4%
General Stores	2.3%
Service Dealers	2.0%

Thus even in an item like water heaters, in which some other types of outlets might seem likely to excel, specialty dealers did much more than hold their own—they got a far greater percentage of sales than their representation in the total number of dealers.

Rodgers Now President Of White-Rodgers Co.

ST. LOUIS—J. A. Rodgers has been elected president of the White-Rodgers Electric Co., manufacturer of electric controls for the refrigeration and other industries.

He succeeds L. F. Blough, who is retiring as president to undertake other duties connected with the organization, the company announced.

NEWA Convenes In Buffalo May 3-7

NEW YORK CITY—With a series of four forum discussions as one of its features, the annual convention of the National Electrical Wholesalers Association will be held at the Hotel Statler in Buffalo, N. Y., May 3-7, it was announced by Charles G. Pyle, managing director.

The convention, which will mark NEWA's 40th anniversary, will be divided into meetings of the Apparatus and Supply Division, May 3-5, and the Appliance Division, May 5-7. A general session will be held May 5.

Two forum discussions will be held during each division's sessions, with committee chairmen constituting each panel. Discussions, including questions from the floor, will be led by the following moderators:

D. M. Salsbury, chairman of the Apparatus and Supply Division and

(Concluded on Back Page, Column 2)

H. F. Hildreth Will Head REMA for Coming Year

CHICAGO—H. F. Hildreth, sales manager, Refrigeration Specialties Division, Westinghouse Electric Corp., Springfield, Mass., was elected president of the Refrigeration Equipment Manufacturers Association at its annual board of directors meeting held in Chicago, April 1 to 3.

He succeeds E. M. Flannery, vice president of the Bush Mfg. Co. as head of the association of manufacturers in the refrigeration and air

(Concluded on Page 4, Column 2)

Utilities Planning Big Drive To Spur All-Electric Kitchen

CHICAGO — National Electrical Retailers Association says that a growing number of dealers—particularly those that handled appliances as a sideline—are going out of business, and Nera expresses the thought that this is probably a healthy thing.

The association reported in a recent bulletin that it had made a telephone survey of some 500 dealers in the area around, but outside of metropolitan Chicago.

"Dealer after dealer, mostly sideline variety, told us he was quitting," said the report. "Distributors in another area informed us that 30% of dealers were delinquent in payment of bills.

"To us this is good news for certainly we can all agree that far too many dealers have been set up. It doesn't mean that our industry is not a good one that will continue to attract high grade merchants. It simply means that the lush selling days are over . . . that those dealers who came into our industry to share in lush selling are now going back to their regular business. It means too that many under-financed new dealers are unable to cope with the new highly competitive market."

* * *

CHICAGO—As the first step in a national program to continue the trend toward electrical living, the Edison Electric Institute has developed a new promotional and educational program on the all-electric kitchen.

To be available for utilities next fall, the new kitchen program was announced during the fourteenth annual sales conference of the Institute held at the Edgewater Beach hotel here last week.

Attendance at the three-day conference was well ahead of all previous meetings.

"Kitchenizing—Of Course It's Electric" is the keynote of the new promotion drive, which was introduced by the Institute's Electric Kitchen and Laundry Committee.

In presenting the program, the committee urged that "the electric kitchen program be later enlarged

(Concluded on Page 33, Column 1)

Raynes Is Executive At Universal Cooler

DETROIT, April 8—The appointment of Burt Raynes, formerly an operating executive of Rohr Aircraft Corp., as assistant manager of the Universal Cooler Division, International Detrola Corp., was announced today by J. E. Rheim, Detrola vice president in charge of radio and refrigeration.

Rohr Aircraft is a Detrola subsidiary in Chula Vista, Calif.

Commercial Shipments Maintained High Level During 4th Quarter

WASHINGTON, D. C.—Shipments of commercial refrigeration and air conditioning equipment for the fourth quarter of 1947 as reported to the Bureau of Census by 69 manufacturers showed that sales generally held to the high level of the third quarter, the only marked decrease being in self-contained air conditioning units.

Total condensing units of 279,063 units were only a shade under the 293,238 reported for the third quarter. Hermetic units increased in the fourth quarter to 185,687 machines as compared to the third quarter total for hermetics of 166,032. Shipments of open-type units dropped to 82,000 for the fourth quarter from 117,940 for the third.

Unit cooler sales decreased slightly over a 1,000 units and the value of heat exchanger equipment shipped also showed a relatively slight decrease.

Self-contained air conditioning units dropped to 9,891 for the fourth quarter as compared to 15,854 for the third period.

New Top Officers of REMA

H. F. Hildreth (right), Refrigeration Specialties Division of Westinghouse, newly elected president of Refrigeration Equipment Manufacturers Association, shares mutual congratulations with K. B. Thorndike (left), Detroit Lubricator Co., new Rema vice president.

5-Model Crosley Refrigerator Line Introduced

1 Freezer, 4 Ranges, and Radio-Television Sets Bow In Showings at 106 Points

CINCINNATI—Five new refrigerators, three gas ranges, one electric range, a home freezer, and radio and television sets are now being introduced to dealers by Crosley Division of Avco Mfg. Co.

Showings for dealers are being held this month at 106 distribution points.

Major selling points of the new refrigerator line are reduced prices and improved models. The 1948 prices are as follows:

Model	Capacity	List (suggested)
M-88	8.8 cu. ft.	$259.95
D-88	8.6 cu. ft.	309.95
SD-88	8.6 cu. ft.	359.95
F-108	10.5 cu. ft.	339.95
SD-108	10.5 cu. ft.	399.95

Last year Crosley offered only two refrigerators, the SE-747, which listed at $279.95, and the SE-947, which sold for $319.95. It is between these two models and the M-88 of this year that Crosley based its previous an-

(Concluded on Page 33, Column 3)

Co-op Ad Plan To Cover G-E Lines

BRIDGEPORT, Conn.—All General Electric major appliances, including complete electric kitchens and laundries, are covered by a new cooperative advertising plan which goes into effect this month, according to George E. Simons, major appliance advertising manager for the company.

Under the plan, the retailers will pay 50% and General Electric and the distributor the remaining 50% of the costs of approved advertising of General Electric refrigerators,

(Concluded on Page 33, Column 3)

Philco Refrigerator Div. Sales Total $66,613,000

PHILADELPHIA — Refrigerator sales totaled $66,613,000 in 1947, Philco Corp. announced in its annual report, which noted new high records in every division of the company.

The refrigerator division produced more than twice as many units in 1947 as in any previous year, and the company compares the above sales total with the $3,326,000 made in 1939, when Philco entered the refrigeration field.

"Assuming a free flow of raw materials, Philco now has facilities to

(Concluded on Page 33, Column 5)

Superior Valve Appoints Wilson Sales Manager

PITTSBURGH—I. A. (Irv) Wilson has been made sales manager of Superior Valve & Fittings Co., effective April 15, and will be located at the home office of the company in Pittsburgh.

Wilson has spent many years in the industry, having operated his own sales and service business in Rochester, N. Y., employed by Melchior, Armstrong, Dessau Co. as branch manager in Rochester and in New York City, then Dole Refrigerating Co., whom he left to join Douglas Aircraft as a refrigeration technician for service overseas. He

(Concluded on Page 2, Column 1)

Sales Manager

I. A. WILSON

* * *

Superior Names Wilson--

(Concluded from Page 1)

spent a year in East Africa, mainly in installation work at an advanced Army Air Base in Gura, Eritrea.

Shortly after returning from East Africa in 1943, Wilson joined Superior as a factory representative, covering the Pittsburgh area; in August of 1944 he became midwestern representative for the company with headquarters in Chicago, and in February of 1945 was made manager of Superior's Chicago office and warehouse, a stocking and shipping point for standard Superior products.

Govt. Continues Work On 'Back-Porch' Cooling Unit at U. of Texas

AUSTIN, Tex. — A "back porch" ice and evaporative cooling unit is being developed at the University of Texas under the sponsorship of the Department of Commerce, Dean W. R. Woolrich, of the Bureau of Engineering Research, has revealed.

The "package unit" combines the use of ice, evaporative cooling, and a fan ventilating system, and when commercialized, can be purchased from the factories and installed by ice companies, Dean Woolrich said.

Developed under the direction of Associate Professor J. D. McFarland, the unit is aimed at those small homes which cannot afford the luxury of a machine air conditioning unit, according to Dean Woolrich.

"Evaporative cooling is satisfactory for daytime hours in locations over 100 miles inland from the coast, and 80% of the time usable in inland cities," Dean Woolrich explained. "The remaining 20% of the time the air is too humid for effective evaporative cooling. Thus the unit developed will use ice when either evaporative cooling or fan ventilation is inadequate. Ice will be used, particularly, when there is a large number of people in the house."

Because the Department of Commerce is sponsoring the research and all results will be reported directly to it, reports will not be available to the public until released, probably sometime next fall, through the Federal agency, Dean Woolrich said.

Jacobs Co. Changes Appliance Div. Setup

DETROIT — An organizational change in the Appliance Division, made to stimulate sales efficiency and to meet the keen competition that lies ahead, has been announced by Rex C. Jacobs, president of F. L. Jacobs Co., manufacturer of the Launderall automatic home laundry unit.

The position of director of the Appliance Division of the F. L. Jacobs Co. has been eliminated, and those duties formerly under the jurisdiction of Edward A. Ash, who headed that division, are being taken over by Clyde G. Remmo, sales manager. A new assignment for Ash will be announced at a later date.

Food Tie-In Helps Supermarket Sell 100 Appliances In 1 Day

HOUSTON, Tex.—An idea of the position which food store supermarkets can attain in appliance retailing was indicated during the February opening of the new 38,000 sq. ft. supermarket of Henke & Pillot here —when more than 100 refrigerators, ranges, washing machines, and other major appliances were sold in a single day.

The Henke & Pillot organization has "pioneered the way" in selling major home appliances "close to the foods with which they will be used," according to J. L. Brown, vice president. A staff of specialty salesmen is on hand in the new supermarket for the purpose of making demonstrations.

NERA Tackles Trade-In Problem at Conference In Chicago May 5-6

CHICAGO—"Trade-Ins and What Are We Going to Do About Them?" will be the subject of the National Electrical Retailers Association conference on trade-ins to be held in the Merchants & Manufacturers Club, Merchandise Mart, Chicago on May 5 and 6.

Chairman of the Nera Committee on Trade-Ins is F. E. Morrison, manager, appliance department, Rockford Standard Furniture Co., Rockford, Ill., who will preside at all sessions.

Morrison states that the purpose of the conference is to find an answer to this pressing industry problem. On the first day of the conference, dealer committee members will meet and discuss recommendations to be made at the joint conference on the following day.

Invitations to attend the second day of the conference have been extended to manufacturers' representatives and all other people concerned with trade-ins. They will discuss with the dealer committee the ways and means of handling trade-ins, and prepare recommendations in printed form that it is hoped will be of guidance to dealers and will be recognized as an industry manual.

Questions to be discussed at the Nera Conference on Trade-Ins include methods of handling trade-ins, special problems encountered, difficulty of obtaining parts, methods of developing prospects for reconditioned appliances, inflated list prices to cover allowances, and use of the Nera Trade-In Guide.

Members of the Nera Committee on Trade-Ins are: Bob Shelley, R. B. Shelley Co., Atlanta; C. M. Sisson, Sisson & Sons, Englewood, Colo; D. A. Evjen, Erbe-Hoffman Co., New Holstein, Wis.; Gunnar Smidt, Chas. V. Weise Co., Rockford, Ill.; F. H. Ruth, Cope Electric Co., Alliance, Ohio; J. T. Fritz, Fritz Electric Supply, Chanute, Kan.; C. W. Hancock, Fulmers Furniture Co., Santa Cruz, Calif.; F. L. Monette, Beaudry & Monette, Inc., Lowell, Mass.; H. S. Bullock, Rogue River Hardware, Grant's Pass, Ore.; R. A. Crismond, Bob Crismond Appliance Co., Sherman Oaks, Calif.; C. W. Cutshall, Schneider-Kaiser Co., Ft. Wayne, Ind.

C. H. McCann, McCann Appliance Co., New Boston, Ohio; J. T. Vanian, Radio Appliance Center, Pasadena, Calif.; L. G. Moore, Clemons Bros. Co., Chattanooga, Tenn.; W. F. Fenske, Good Housekeeping Shop, Detroit; Henry Dinges, Henry Dinges & Sons, Inc., Somers, Wis.; Freeman Snoddon, Eastwood Appliance Shop, Detroit; M. E. Brunderman, Brunderman Appliances, Chicago; J. H. Mausure, United Appliance Service, Chicago; and C. E. Chambers, Fix-It Shop, Toledo.

2800 Go on Strike At Seeger Plants

EVANSVILLE, Ind.—About 2,800 members of Local 813, United Electrical Workers, CIO, went on strike at the Seeger Refrigerator Co. plants here at midnight March 31 for a new contract and higher pay. The plant employs approximately 3,400 workers.

Picket lines were immediately thrown around the company's property.

A strike affecting some 7,000 employes of Servel, Inc., manufacturer of gas refrigerators here, was averted earlier in the week, when UE officials agreed to continue at their jobs during contract negotiations. The union demands a wage increase of 10 cents an hour.

Business Failures Drop Off During Week of March 25

NEW YORK CITY—Though still at a level considerably higher than at the same time last year, business failures showed a decline for the week ending March 25, Dun & Bradstreet has announced.

Dun & Bradstreet recorded 101 business failures during that week as compared with 106 the previous week. Eighty-seven of these had liabilities of $5,000 or more.

Last year, 63 failures, with 54 having liabilities greater than $5,000, were reported.

L. E. Moffat, 'Electrical Merchandising' Editor, Dies

NEW YORK CITY — Lester E. Moffatt, editor of *Electrical Merchandising* since 1930 and a resident of 126 Washington Place, died here last week following an emergency operation. He was 59 years old.

Moffatt had been affiliated with the electrical industry all his life. In his early years he worked for the Western Electric Corp. in San Francisco, and the Graybar Electric Co. in Denver, Colo. From 1914 to 1918 he was head of the firm Biglin & Moffatt Co., Inc., manufacturers agents in New York City; he was sales and advertising manager of Stealite Electric Products Co., New York, from 1918 to 1920; and operated his own advertising agency from 1920 to 1924.

He joined McGraw-Hill Publishing Co. in 1924 and served successively as assistant editor, western editor, managing editor, and editor-in-chief of *Electrical Merchandising*.

New Factory Branch for Bendix Is Established at Pittsburgh

SOUTH BEND, Ind. — Establishment of a factory branch in Pittsburgh is announced by W. F. Linville, general sales manager for Bendix Home Appliances, Inc.

W. A. Becker, midwest regional manager is serving temporarily as manager of the Pittsburgh branch, and Albert A. Smith, a field service supervisor, is temporary service manager. The Ludwig Hommel Co.'s franchise as distributor in Pittsburgh expired March 31.

UNIVERSAL COOLER

Application Engineering

saves time, effort and money-for YOU

REAL TEAMWORK

between our condensing unit and your refrigerated product can come only from careful engineering. U. C. engineers provide this important service without expense to you.

REAL TESTS

under actual operating conditions in the U. C. "hot room" provide a rigorous proving ground for U. C. condensing units – installed in your refrigerated product.

REAL ECONOMY

is possible in the planning stages. U. C. engineers will gladly work with YOUR engineers and help analyze your problem. The result: a product and a condensing unit that are truly "meant for each other".

Write or wire your problem today – let us solve it, the Universal Cooler way.

A typical "hot room" scene at the Universal Cooler plant where all new applications undergo exhaustive tests.

HERMETICS 1/8 H.P. TO 3/4 H.P. | REMOTES 3/4 H.P. TO 15 H.P. | SELF-CONTAINED 1/6 H.P. TO 3/4 H.P.

UNIVERSAL COOLER

1922—1948 26 YEARS OF PROGRESS

DIVISION INTERNATIONAL DETROLA CORPORATION

MARION, OHIO • BRANTFORD, ONTARIO

Dependable FLOW CONTROL

...IN YOUR TEMPRITE DRINKING WATER COOLERS

1. Dependable, automatic flow-control does away with spouting and splashing. No annoying water fluctuations. 2. Smart, streamlined styling blends harmoniously into all surroundings. 3. Effortless finger-tip pressure produces a steady stream of perfect-temperature drinking water. 4. Temprite bubbler design gives maximum sanitary protection.

User Protected by 5-Year Warranty Plan

All models meet requirements of the National Bureau of Standards and Underwriters Laboratories, Inc.

Manufacturers of water cooling equipment since 1929.

TEMPRITE PRODUCTS CORP.

43 PIQUETTE AVE. DETROIT 2, MICH.

Refrigerators Pace Other Appliances In Chattanooga With 33% Sales Increase

CHATTANOOGA, Tenn. — Healthy sales increases during February on all major appliances except clothes washers were noted in a report issued recently by the Electric Power Board here.

Clothes washer volume declined by 10% but still maintained a high level.

Outstanding sales increase for the month was registered in vacuum cleaners where the listed sales were 1,565 units as compared to 365 for January. However, the February figure includes both the January and February sales of a new outlet in Chattanooga, the Electrolux Corp., according to C. B. Osborne, EPB sales manager.

"These fellows are really doing an outstanding job and my prediction of 10,000 vacuum cleaner sales in Chattanooga for 1948 is beginning to look reasonable since these boys began operating," he declared.

Refrigerators led all other major appliances in sales gains with an increase of 33% over January. Ironer sales were up 31%, home freezers 25%, ranges 14%, and water heaters 13%.

On the commercial side, sales of air conditioning units rose from 2 to 6, while commercial refrigerator sales dropped from 6 units to 5.

The utility's sales report for February follows:

Appliance	Units Sold	Average Unit Price	Total Sales Value
Domestic Refrigerators	451	$ 274.32	$123,719.41
Home Freezers	15	433.16	6,497.45
Ranges	414	240.96	99,755.43
Water Heaters	201	120.72	24,264.22
Ironers	38	161.23	6,127.00
Vacuum Cleaners	1,565	71.46	111,839.25
Clothes Washers	442	179.88	79,504.84
Clothes Dryers	9	229.53	2,065.75
Air Conditioning Units	6	1,135.31	6,811.84
Commercial Refrigerators	5	831.52	4,157.61
Freezing Cabinets	3	966.67	2,900.00
Milk, Beverage Coolers	89	353.83	31,490.97
Ice Makers, Water Coolers	1	315.27	315.27

H. S. T. Baldwin Will Represent Victor In 6 Southern States

HAGERSTOWN, Md. — Victor Products Corp. has appointed H. S. T. Baldwin as its sales representative in the Texas territory which includes Mississippi, Louisiana, Texas, Oklahoma, and the trading area of Shreveport extending into Arkansas.

Baldwin has been in the sales, sales promotion, and sales management field for more than 10 years. The last two years he has been in charge of sales and customers service relation with a national refrigeration concern.

As Victor's representative, Baldwin will carry out the Victor sales policy to more than 15 distributors.

RABBIT MEAT

Business Takes a Hop When Nebraskan Freezes It

OMAHA, Neb.—Sharp freezing and refrigerated storage have made it possible for Lou Wagman to establish a thriving new Omaha industry involving the processing of rabbit meat.

He has established a plant at 515 South 13th St., and states that refrigeration has been invaluable to his business because it has overcome the objections to rabbit meat of many consumers who shunned the carcasses in meat cases "because they looked like cats."

Wagman said public acceptance of his product is growing, and he thinks rabbit packing has a bright future.

The new type of merchandising which is zooming the sales of rabbit meat depends upon quick-freezing. The rabbits are cut up and frozen to be packaged like frozen chicken. They sell for 69 cents a pound in Omaha, which is somewhat under the price of frozen chicken.

Wagman started his rabbit meat business as a sideline 12 years ago. He is a meat cutter by trade, so the avocation fitted in well with his vocation. The business gradually grew until the idea of merchandising frozen rabbit meat was put into practice.

Lincoln Sets Up Fee Basis For Electrical Inspections

LINCOLN, Neb. — Long-delayed action has been taken by the city council to put into effect electrical inspection fees intended to make the office of electrical inspector self-supporting, but by-passing the bulk of the new and controversial electrical code which met with opposition of air conditioning contractors and which has been laid aside by the council. The fee schedules are merely appended to the old electrical code.

Air conditioning and refrigeration firms objected to the proposed new code because it would have required the presence of a licensed electrician on jobs that servicemen for the firms are capable of taking care of adequately.

Special Sound Movie Will Replace Speech-Making In NCRSA Campaign To Sell Merits of Membership

MINNEAPOLIS—To sell the merits of the National Commercial Refrigerator Sales Association more effectively to local refrigerator distributor groups, R. H. Muehlberg, executive secretary of the association, is planning to substitute sound movies in place of speech-making.

An experienced photographer in his own right, Muehlberg has already begun laying out the film story and shooting scenes. He hopes to complete the project by the end of July.

The movie, which will tell of the work and purpose of the NCRSA, will cover meetings conducted by local NCRSA chapters, show the outside and inside operations of a successful distributorship with comments on why it is successful, introduce manufacturers, and explain Federal laws governing the sale of merchandise.

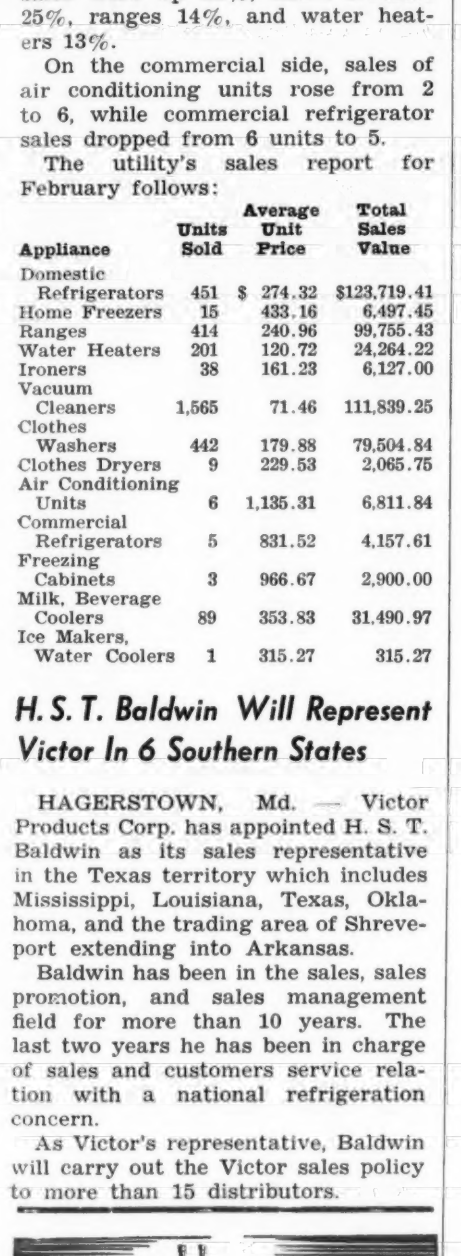
It will be a 16mm. black-and-white sound film running about 55 minutes, Muehlberg said. About a dozen prints, made from the original, will be sent to the various member associations, grocers' associations, and other business groups on request.

"Beside explaining the aims and objectives of the national association," he added, "we are attempting to point out some of the unfair trade practices and at the same time discourage unwarranted cut-throat business activities."

He has already filmed the organizational meeting of the Tri-State Commercial Refrigeration Association in Pittsburgh, and is currently working on the "successful merchant" phase of the picture.

Wyoming Cooling Firm Opens

WORLAND, Wyo. — The Empire Heating & Cooling Co. here has taken out a Wyoming charter with $50,000 capitalization to engage in the heating and air conditioning business. Directors are Clark I. and Dorothy Israel, and Dale L. Beers, all of Billings, Mont.



TY-BRO BUILDS FOR YOU

√ Designers √ Manufacturers

RESTAURANT AND BAR EQUIPMENT

• Soda Fountains • Direct Draw Draft Beer Systems • Salad Chefs • Duct Controlled Bottle Coolers • Sinks • Walk-ins • Reach-ins • Urn Stands • Work Boards • Coil Boxes • Canopies • Wall Siding • Utility Cabinets

Write today for literature and price list

TYSON METAL PRODUCTS CO.
6815 Hamilton Ave.
Pittsburgh 8, Penna.

1'ST IN LINE AT THIRST TIME!

OASIS—made by the world's largest maker of electric drinking water coolers—is *first in line* when it comes to delivering complete thirst relief at low cost. Write for details.

The EBCO Manufacturing Co.
401 W. Town St., Cols. 8, Ohio

Better electric motors through

JACK & HEINTZ

Mass Precision

Electric Motors

Ball Bearings

Refrigeration Compressors

Eisemann Magnetos

Power-full, quiet-running J & H fractional horsepower motors help sell the appliances and machines they operate. Soundly engineered . . . solidly constructed . . . mass-precision produced . . . they are providing dependable, long-lived service. More than a million already are in use. Write for full details on the J & H motor to fit *your* requirement.

Aircraft Starters

Aircraft Generators

Aircraft Inverters

JACK & HEINTZ PRECISION INDUSTRIES, INC., *Cleveland 1, Ohio*

Appliance Assn. Meets In Milwaukee April 20-24

MILWAUKEE—Nearly 150 members and guests are expected to attend the ninth annual meeting of the Appliance Parts Jobbers Association here April 20 to 24.

The association, which is made up chiefly of jobbers of washing machine parts, will make its headquarters at the Wisconsin hotel here.

General sessions will be held on Thursday and Friday, April 22 and 23, and on Saturday morning there will be a service clinic program conducted by Barlow & Seelig Mfg. Co. of Ripon, Wis. in conjunction with the company's Milwaukee distributor, R & S Parts Co.

Executive board meetings are scheduled for Tuesday evening, all day Wednesday, with a final session of the newly elected board Saturday afternoon.

One of the main topics of discussion at both the general sessions and the executive meetings will be the problems of in-warranty exchange of washing machine parts, announced W. L. Cloutier, secretary-treasurer of the association.

A program has already been worked out with a few manufacturers whereby the serviceman who replaces a defective part during the warranty period exchanges it for a new one with the jobber, who in turn exchanges it for a new one from the manufacturer, Cloutier said.

The association hopes to bring more manufacturers in on such an arrangement, and at the Milwaukee meetings the group also plans to work out further promotion of the sale of genuine repair or replacement parts to the trade through established jobbers, added Cloutier.

First meeting of the general membership is scheduled for 10 a.m. Thursday, April 22. A luncheon is included, and following the afternoon meeting, members will attend a buffet supper at the Schlitz Brewery.

Friday's program calls for morning and afternoon sessions.

Hildreth Heads Rema--

(Concluded from Page 1, Column 3)

conditioning industry now numbering 115 members.

Other new officers elected at this meeting were: K. B. Thorndike, vice president, Detroit Lubricator Co., vice president; R. H. Israel, sales manager, Virginia Smelting Co., treasurer; G. M. Kingsland, sales manager, Specialties Division, Minneapolis-Honeywell Regulator Co., secretary.

Those new officers, with Flannery, become the executive committee.

New directors of the association also elected at this meeting are P. L. Craft, Mueller Brass Co.; Jas. F. Dailey, Typhoon Air Conditioning Inc.; H. T. Jarvis, Refrigeration Engineering, Inc.; J. K. Noel, Jr., Victor Products Corp.; H. R. Roberts, Whiting Corp.; R. L. Sears, Lynch Mfg. Corp.; W. J. Stelpflug, Hussmann Refrigeration, Inc.

Others continuing to serve as directors are G. E. Graff, Ranco Inc.; F. J. Hood, Ansul Chemical Co.; R. H. Luscombe, Penn Electric Switch Co.; John M. Schlemmer, General Controls Co.; W. A. Siegfried, Superior Valve & Fittings Co.; Hermann Spoehrer, Sporlan Valve Co.; and E. A. Vallee, Automatic Products Co.

Knoxville Refrigerator, Dishwasher Sales Gain

KNOXVILLE, Tenn. — Refrigerators and dishwashers were the only major appliances to score sales increases here during February, a report issued by the Knoxville Utilities Board has revealed.

Refrigerator sales gained 5% over January and were at their highest peak in several months. One more dishwasher was sold in February than in January, bringing the month's total to 9.

All other major appliances, as reported by 36 local dealers, showed sharp sales declines. Home freezer sales were off 43%, washing machines 39%, ranges 34%, ironers 32%, and water heaters 18%.

Sales tabulation for February follows:

RESIDENTIAL SUMMARY ELECTRICAL APPLIANCE SALES REPORT FOR MONTH OF FEBRUARY, 1948

	No. of Units	Value
Home Freezers	8	$ 1,981
Refrigerators	295	77,173
Ranges	189	44,368
Water Heaters	63	7,807
Other Major Appliances	30	2,412
Dishwashers	9	2,346
Waste Disposal Units	1	124
Washing Machines	274	43,187
Ironers	25	4,514
Space Heaters	33	1,428

Telotte Gets $40,000 Job

SAN ANTONIO, Tex. — Telotte Electric Co. has been awarded a contract for air conditioning the general offices of the International Harvester Co. building and all of the first floor of the new Moore building under construction. Contracts total $40,000.

Handle Western Sales

V. J. McIntyre

John Zant

* * *

Universal Cooler Has New West Sales Setup

MARION, Ohio—Arrangements to further develop Universal Cooler's selling and distribution facilities in the western section of the United States through a new manufacturers' representative organization have been announced by J. P. Scott, Director of Sales for Universal Cooler Division, International Detrola Corp.

Hereafter, the McIntyre Sales Engineering Co. will represent Universal Cooler in the far west in the sale and application of Universal Cooler condensing units, compressors, systems and air-cooled condensers. They are located at 635 S. Kenmore Ave., Los Angeles.

There is no change in the policies or methods of distribution; however, this move will enable Universal Cooler to strengthen its service to its customers in the far west.

The McIntyre Sales Engineering Co. is newly organized with V. J. McIntyre as president and John Zant as vice president. McIntyre has spent 17 years in the refrigeration business and formerly was national sales manager for Nash-Kelvinator. Zant has been Universal Cooler's sales engineering representative in the Far East for the last 10 years and has been with Universal Cooler for more than 13 years. He is a graduate mechanical engineer from Michigan State College.

"Our new arrangements for handling West Coast sales will not be extended to any other territories," Scott emphasized. "We feel that the geographical problems of our western territory can best be solved by turning our representation over to a company having the experience and facilities of such an organization. In our other territories, our own sales engineers from the Marion office will continue to call on our customers and prospects."

'Mobilization' Plan May Have Only Small Effect on Industry

DETROIT—Out of the welter of rumor and conjecture about what effect the industrial mobilization program may have on industry and business in general, and the consumers goods field in particular, the following seem to be about closest to fact:

1. The effect in the next year, barring a crisis that would bring a real state-of-war mobilization, would be relatively small. Some estimates indicate that only 1% of the nation's steel production, for example, would go into the munitions program.

2. There is a definite program, however, under the name of "Allocation of Private Industrial Capacity for Procurement Planning of the Armed Services" directed by the National Military Establishment Munitions Board. Thus far the plan has served chiefly for some planning on tentative allocation of production capacity of specific American manufacturing plants.

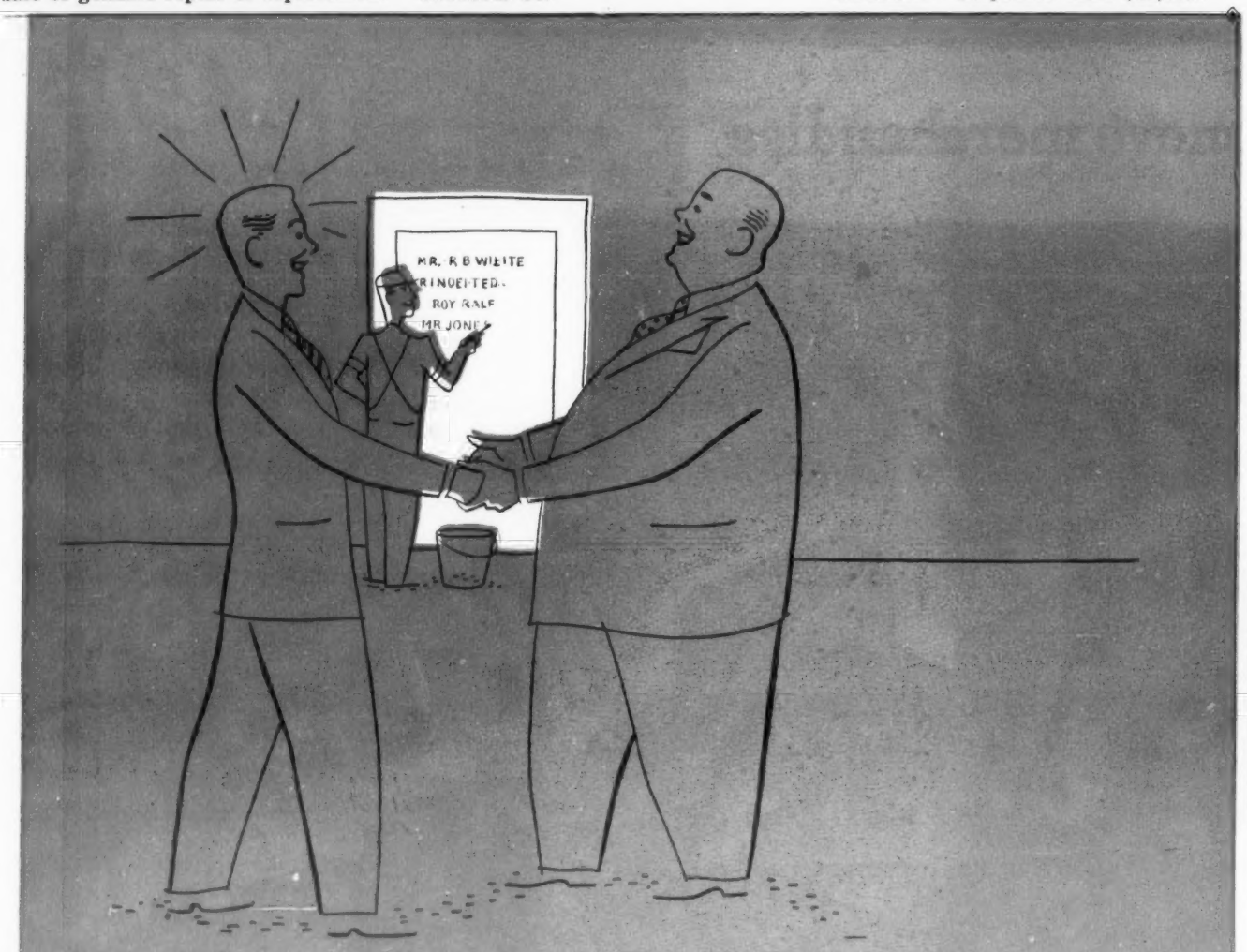
3. There will be some tentative discussion on what will happen to production of non-military goods in case of mobilization-for-war. The industries which are heavy users of metals will face cuts almost as heavy as those in the war just past.

A munitions analysis by this agency showed that there were 86,000 plants "of recognizable size and productivity" in the United States. Out of this total number, it is the goal of the Munitions Board to cover between 22,000 and 25,000 plants, representing roughly 90% of the total capacity.

Representatives of the three military departments will approach the plants for production recommendations by industrialists. The program on the part of individual plant managements is purely voluntary.

When contacting the management of a plant allocated to his particular service, the military representative will show the management the products the service desires manufactured in event of an emergency. The managements will then select the products they consider best suited to their abilities to produce with speed and volume. The armed services will also be provided with specific data concerning the production ability of the plants. Potential production problems will be discussed.

Object of this planning, says the board, is "long range preparedness."



how to get YOUR name on the door

Nobody succeeds like the man who originates sales ideas . . . creates profits.

In Santocel, "world's most efficient insulation," *you* may find a profit-making idea for *your* management. Santocel, by cutting the thickness of insulation walls and doors *in half*, steps up capacity in refrigerating equipment as much as 40% . . . sometimes 100% on small freezers. This added capacity provides a real sales advantage . . . one your company's equipment might use—might "go to town" with! For full details on Santocel—how it saves storage space, *the commodity you're really selling* . . . use the coupon.

Santocel: Reg. U. S. Pat. Off.

SANTOCEL

This seal means "the world's most efficient insulation"

MONSANTO CHEMICALS — PLASTICS

MONSANTO CHEMICAL COMPANY, MERRIMAC DIVISION
Dept. ACM3, Boston 49, Mass.

Please send me full information on Santocel for insulation.

Name _____ Title _____

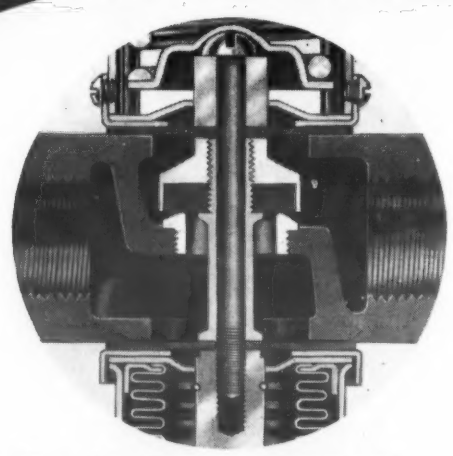
Firm _____

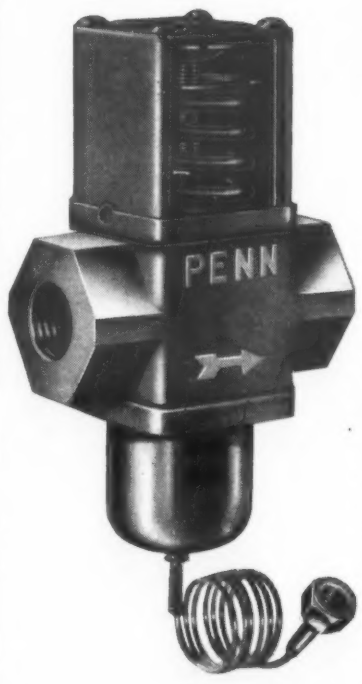
Address _____

City _____ State _____

SERVING INDUSTRY . . . WHICH SERVES MANKIND

KEEP OUT RUST-SEDIMENT





Switch to PENN Water Valves

The cross section above shows that water can't come in contact with the range spring and sliding parts. That's the design feature which assures longer service, better performance from Penn water valves. They're protected from corrosion and sediment which cause premature wear and failure. Dependable performance is assured.

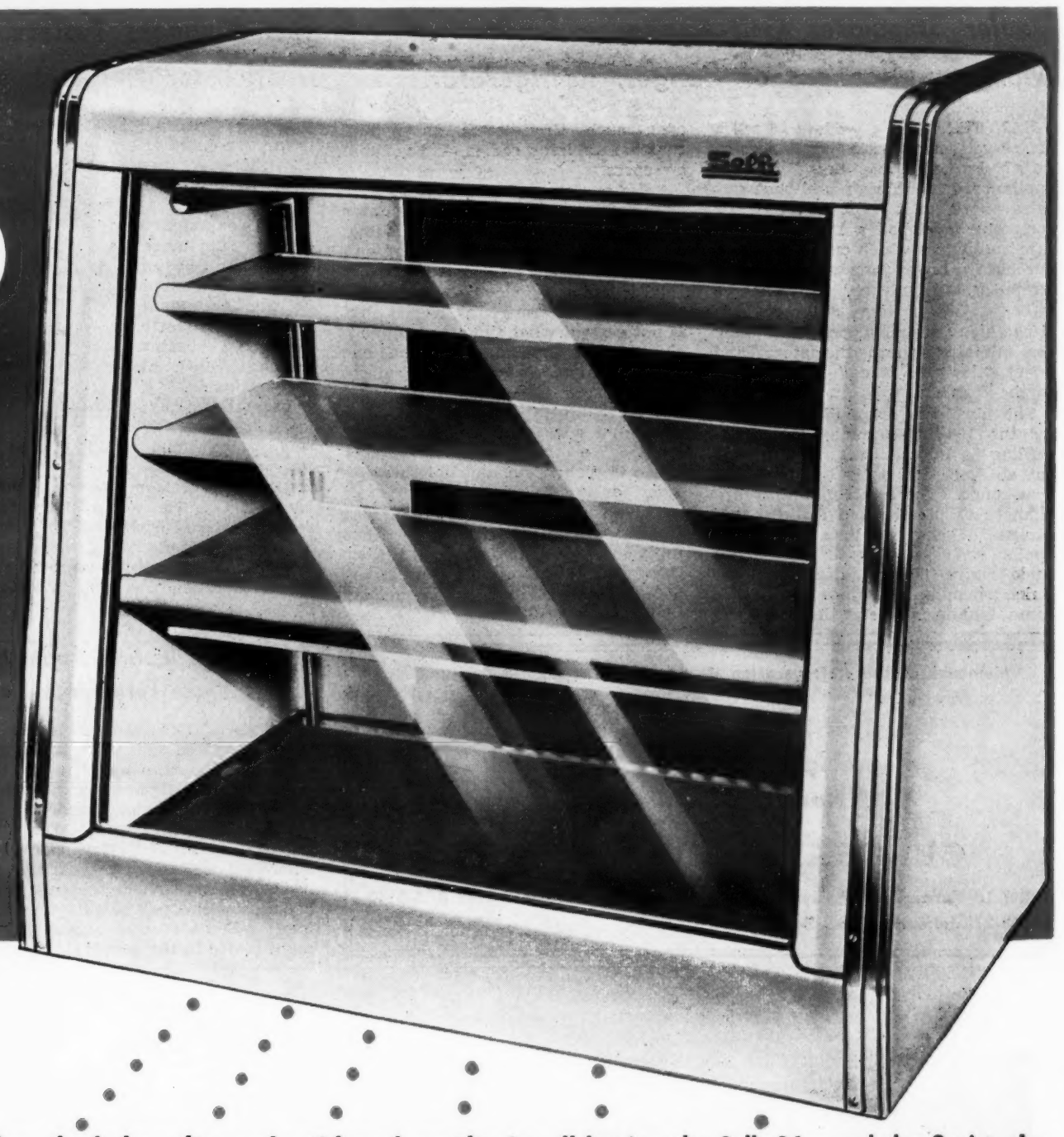
Switch to Penn—on your next refrigeration job specify and buy the Penn 246. Built in threaded and flanged styles, in a wide range of sizes. See your wholesaler or write for Bulletin R-1986-B to **Penn Electric Switch Co., Goshen, Ind.** Export Division: 13 East 40th St., New York 16, U.S.A. In Canada: Penn Controls Ltd., Toronto, Ontario.

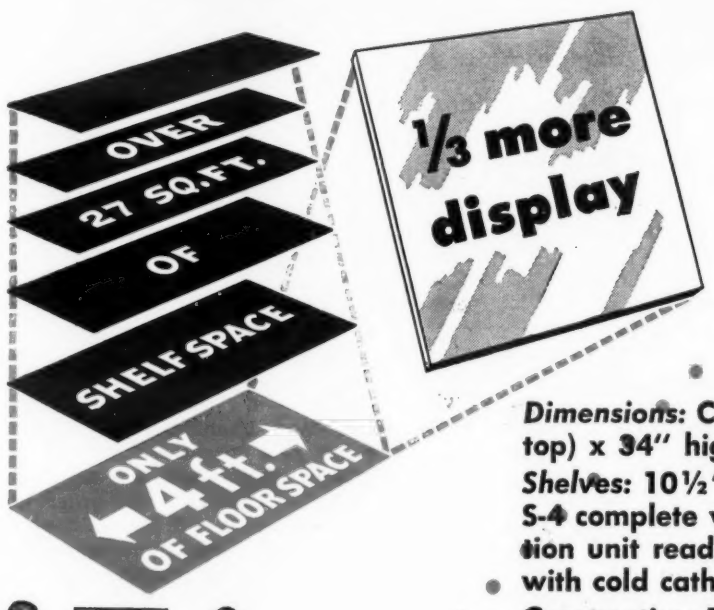
PENN AUTOMATIC CONTROLS

FOR HEATING, REFRIGERATION, AIR CONDITIONING, ENGINES, PUMPS AND AIR COMPRESSORS

THE CASE THAT SELLS TO MORE OUTLETS than all others put together!

Selb S-4 refrigerated DISPLAY CASE





The butcher, the baker, the candy stick maker—they're all buying the Selb S4—and the florist, the dairy store, the delicatessen, and the druggist too—they all need this popular refrigerated display case. It's important equipment for every size of business, from the confectioner to the largest supermarket. *The Selb S-4 sells more—and it fits any store.*

The Selb S-4 brings added display and expansion facilities to retail outlets. Besides compactness and high utility, it provides the flexibility of all-purpose adaptability—as well as portability—in the Selb XS-4 self-contained unit. Gleaming white enamel with glistening chromium trim . . . fluorescent illuminated . . . non-fogging, crystal clear, glass front. The finest equipment . . . worthy of the Selb quality name . . . engineered and manufactured in one of the largest most modern specialized plants in the country.

Dimensions: Case 48" long x 30" wide (23" at top) 50" high; side unit 24" x 28" (24" at top) x 34" high. Over 22 cubic feet capacity.

Shelves: 10½" x 42½", 13½" x 42", 17" x 42". Bottom area 24" x 42"

S-4 complete with cooling coils and expansion valve. XS-4 complete with ¼ h. p. refrigeration unit ready to plug in—no special wiring or tubing installation necessary. Illuminated with cold cathode fluorescent lighting.

Construction: Rustproofed, heavy gauge, sheet steel inside and outside, gleaming white baked enamel finish trimmed with glistening chrome. Alumilite finish shelves. Display front is crystal clear, triple-paned, non-fogging, high strength glass 38½" x 38½" (equivalent to average 6 ft. case).

Nationally Advertised and dealer merchandised

SELB LEADS THE WAY SEE IT TODAY

THE SELB SELLS FOR YOU BECAUSE IT SELLS FOR RETAILERS—SEND FOR DEALERS' DETAILS

Selb MANUFACTURING CO.

812 OLIVE ST. ST. LOUIS 1, MO.

Dealer Stimulates Gift-Appliance Buying with Miniature Replicas of Ranges, Refrigerators

SAN FRANCISCO—Want to sell a larger volume of major appliances as gifts? Purcell Bros., San Francisco appliance dealer, has found that gift sales more than tripled when the company developed a line of miniature appliances which customers may purchase, have handsomely gift-wrapped, and delivered to friends as gifts.

The lucky recipient may then bring the miniatures into the store, and select "the real thing" for delivery to the home.

The idea was originally developed for the 1947 Christmas season, according to Purcell Bros., but worked out so well that it is available the year-round. The small miniature appliances of plastic, and faithful facsimiles of several lines of major appliances carried by the store, include ranges, refrigerators, cabinet sinks, washing machines, automatic home laundries, water heaters, and even such tiny items as pop-up toasters, tabletop radios, and vacuum sweepers.

"The customer who wants to give an appliance as a gift, but hesitates for fear of buying the wrong thing, completely solves the problem with the miniatures," it was pointed out.

"For example, if a customer wants to buy a new range as a gift, but is not certain what type the recipient can use, the customer merely has one of our miniature ranges wrapped up, and sent to the recipient, with a note inviting the recipient to come down and select any range from our stock. We then deliver whatever range is picked out and bill the gift-giver for the full amount."

Purcell Bros. adopted this idea from a national hat chain, which has for years sold miniature hats to help solve the size problem in giving men new hats during the holiday seasons.

Toal Manages Eastern District for Hotpoint

NEW YORK CITY—E. P. Toal has been appointed New England-New York district manager of Hotpoint Inc. with offices here.

E. P. Toal

Toal's experience in the appliance industry dates back to 1937 when he was graduated from Marquette university, after gaining national recognition as a football player. Until recently he was sales manager of the standard radio receiver line of General Electric Co. He was district radio representative for General Electric at Minneapolis, and during the war he coordinated the manufacture of electronic tubes for the navy and signal corps.

Anchor Distributing Appoints Eskind House Furnishings Head

PITTSBURGH—Milton Eskind has been appointed manager, house furnishings department, Anchor Distributing Co., it was announced by Harold W. Goldstein, president.

Eskind comes to Anchor Distributing Co. from Nat Gavender, Inc., where for the past two years he has been vice president in charge of house furnishings and furniture buying for some of the largest department stores in the country.

Trade Gears for Tougher Selling Job As Signs Indicate Rising Inventories

DETROIT—Signs continue to pop up on the household appliance scene indicating that, as one industry executive put it, "the time is definitely here to do a selling job on everything."

For example, take the latest results of a shopping survey conducted monthly by a large appliance firm and covering 130 stores in 26 major cities. Here is what the survey turned up on the status of various appliances as of the end of January:

Refrigerators: Dealers had more of all brands on hand at the close of January than in any previous post-war month. From September to the end of January, there was a 29% increase in the number of units on display in retail outlets.

Automatic washers: "Now in full supply," with consumer demand reportedly slowing down in some instances. Conventional washing machines: Generally available everywhere and being advertised.

Electric irons: Can be had for immediate delivery in most cities. Automatic toasters: Still hard to get.

Heaters, mixers, heating pads, vacuum cleaners, roasters, etc.: No longer included in the survey because "they've caught up with the demand."

Or take reports that prewar trade-in allowances on off-brand refrigerators and certain types of automatic electric washers are being revived by some small appliance stores in an attempt to reduce inventories.

"In a few isolated instances, according to dealers, trade-in allowances are really disguised price cuts, since no effort is made to possess the customer's old appliance," the *New York Times* reported recently.

"It is emphasized," the *Times* story went on, "that top name brands do not figure at all in trade-in operations because inventories are not uncomfortable. Moreover, large independents, department stores, and furniture chains have not resorted to trade-ins solely as a means of stimulating sales of new refrigerators and washers."

But a spokesman for a large buying office, commenting on a possible widespread restoration of trade-in allowances on refrigerators and washers in the near future, was quoted as saying:

"We are not yet at the stage where we are prepared to offer such allowances. However, we are doing intensive research designed to determine real values of used refrigerators so that, when the time comes, we can jump right in."

Discussing recent advertising of trade-in allowances on nationally-advertised refrigerators and washers in Chicago, a department store buyer reportedly predicted that such action will not be taken in New York for some time. But he said some small dealers here are engaging in the practice without advertising their offers.

That appliance manufacturers are well aware of these and other market indicators, that they are fast gearing up their organizations to cope with tough, competitive selling conditions, becomes more evident every day.

An increasing number of announcements of such things as intensive sales training courses, greatly-expanded advertising schedules, home demonstration plans, and contests indicate how keenly the producers realize the need for a hard-hitting sales program. They know the long-anticipated battle has already started.

Seeger Earns $902,000 More In First Half Than Previous Year

ST. PAUL—The Seeger Refrigeration Co. of St. Paul reported its net earnings for the six months ending Feb. 29—the first half of the company's fiscal year—to have amounted to $1,454,478, an increase of $902,081 over net profit of a similar period last year.

These earnings are equivalent to $1.32 per share for the first half of the current fiscal year compared with 50 cents per share a year previous. The company has 1,100,000 shares of capital stock outstanding.

Gross sales totaled $28,479,855 for the six months ending Feb. 29, an increase of $13,896,929 over the $14,582,926 reported for the first six months of the previous fiscal year.

Nashville Adds Water Heaters

NASHVILLE, Tenn. — Automatic electric water heaters are now being used by 19,482 local housewives, the Nashville Electric Service pointed out in a recent newspaper advertisement.

Milady Will Buy Dresses At Washing Sessions

NEW YORK CITY — To occupy Milady's time while she's waiting for the wash to clear through the neighborhood self-service laundry, Telecoin Corp. will furnish fashion catalogs from which she can select a dress for delivery by mail-order.

This program, to be inaugurated soon in nearly 1,300 Launderette stores, will utilize catalogs from Broadway Fashions, local mail-order house. All operators will receive the current spring catalog, plus a free garment from the mail-order house. A commission will be paid on each garment sold by Launderette owners, the announcement said.

Any item selected from a catalog would be ordered direct from Broadway Fashions and the merchandise delivered C.O.D.

Present plans call for other mail-order clothing items to be added monthly. Advertisements announcing this new policy have already begun to appear in national magazines.

Members of the Refrigeration Equipment Wholesalers Association

Your refrigeration parts and supply house in Central New York and Northern Pennsylvania

CENTRAL SERVICE SUPPLY

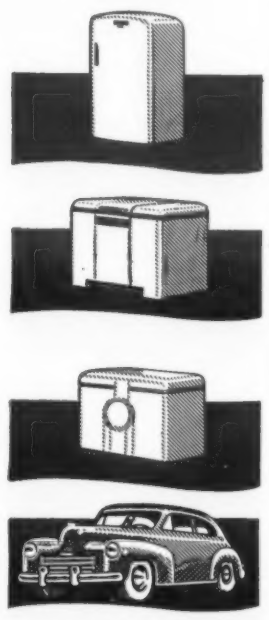
647 S. Warren Street, Syracuse, N. Y. Phones 3-0149 & 3-0140
209-211 Jefferson Ave., Scranton, Pa. Phone 3-4000

It's the Bonderite spray! Metal parts traveling through it emerge with a close-grained coating of nonmetallic Bonderite crystals, ready to take and *hold* the final paint finish.

The Bonderite spray builds long life for paint. By inhibiting rust and corrosion and providing a secure anchor for the paint film, Bonderizing acts to prolong fine appearance and service life. Bonderizing is fast, economical, simply and positively controlled. Results are uniformly effective.

Refrigerators, home freezers, air conditioning units—and many other metal products on which a *lasting* quality paint finish is important—are Bonderized.

Bonderized products look better longer!



YOUR Product, too, Deserves Bonderizing!

Guard its good looks—and your customers' satisfaction —by Bonderizing before the final finish. It costs little, adds much. Write today for full information.

Parker

PARKER RUST PROOF COMPANY
2170 East Milwaukee Ave.
Detroit 11, Michigan

BONDERIZING Holds Paint to Metal . . . PARKERIZING Inhibits Rust . . . PARCO LUBRIZING Retards Wear on Friction Surfaces

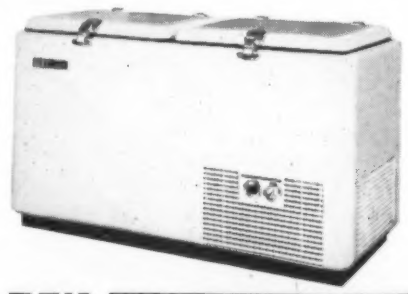
BEN-HUR Farm and Home Freezers

Beauty that wins instant attention and approval . . . a wealth of engineering features that guarantee superior efficiency in years of convenient food protection . . . this is the combination that makes the BEN-HUR dealer franchise highly enviable.

Take any one of the FOUR popular BEN-HUR Models — 6, 9, 12.5 or 18 cubic foot sizes — give it a feature by feature comparison. The BEN-HUR comes out on top consistently — and proves its superiority in the home after you install it.

COMPARE THEM ALL . . . And You'll Choose The BEN-HUR Line

Powerful National Advertising . . . Complete Selling and Display Materials . . . Direct Mail Sales Helps . . . Seasonal Newspaper Ad Mats . . . are all EXTRAS that make the BEN-HUR Line highly profitable.

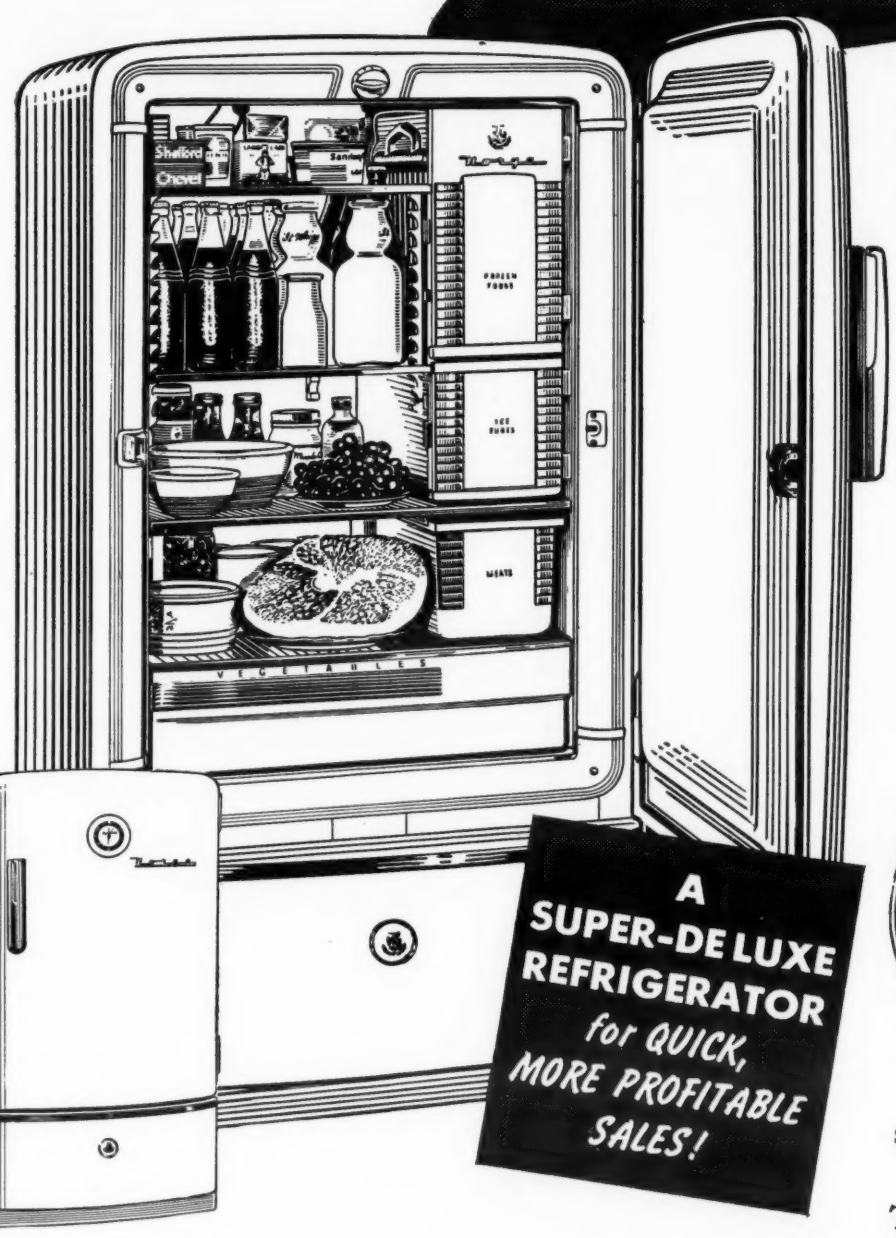


BEN-HUR MFG. CO.
Dept. AC, 634 E. Keefe Ave., Milwaukee 12, Wis.

BEN-HUR FARM and HOME FREEZERS

HEALTHFUL LIVING THROUGH FROZEN FOODS

DEPEND ON NORGE FOR THE BEST!



in Refrigerators

POWER-PACKED PROMOTION SMASHES HOME THE STORY OF THE EXCLUSIVE NORGE Self-D-Froster

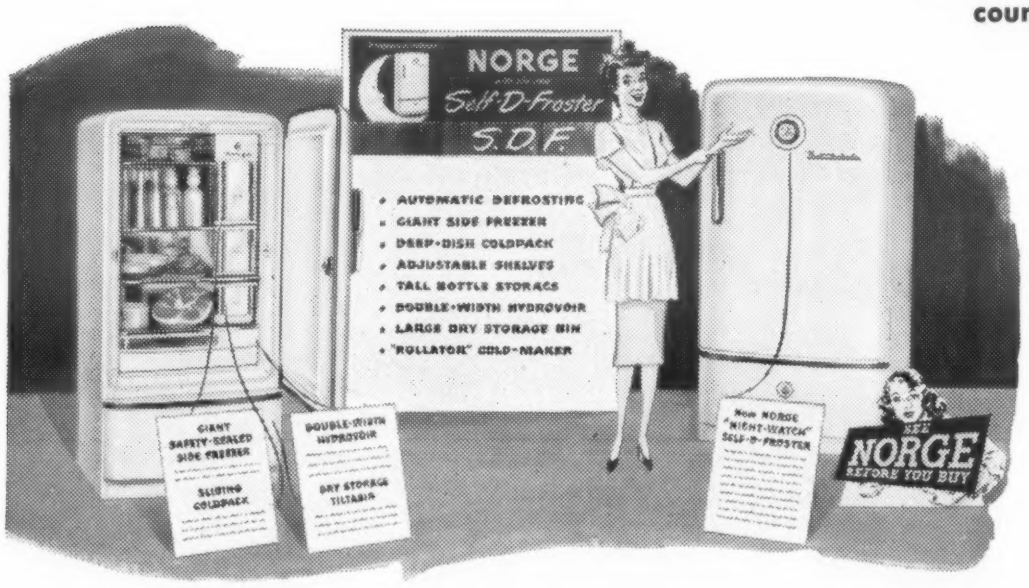
Norge—and only Norge—refrigerators are equipped with the Self-D-Froster that defrosts the refrigerator, automatically, every night. To help retailers cash in on this powerful and exclusive Norge feature, Norge has just completed a promotion campaign designed to make every person in the country conscious of the meaning of "S.D.F."

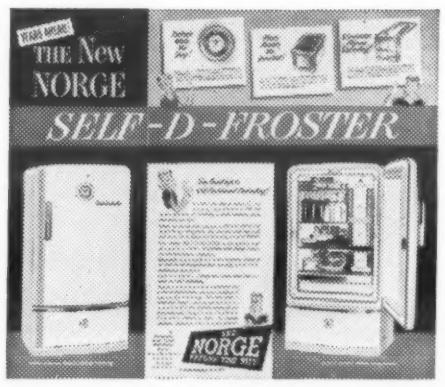
The "teaser" part of the promotion was accomplished with outdoor posters ("It happens at midnight . . ."), newspaper ads, window stickers, wall hangers and radio spot announcements. Two weeks later the "answer" appeared via outdoor boards, newspaper ads, window stickers, wall hangers, danglers, counter cards, blotters, radio announcements and sales literature. Simultaneously, an attractive window display pointed up the advantages of the Self-D-Froster.

Once again, Norge leads the way with the finest line of refrigerators in its history. The NSD-848, shown here, is a good example: 8 cubic feet of storage space; Self-D-Froster; safety-sealed Giant Side Freezer; Cold-pack; full-width Hydrovoir; dry-storage Tiltabin; Air-Freshener lamp. Stores up to 37 pounds of frozen food, plus 12 pounds of cold-kept meat. Aggressive national magazine advertising continuously advises buyers that "The best dealer in town sells Norge." Norge Division, Borg-Warner Corporation, Detroit 26, Michigan.

This teaser poster blanketed the country for two weeks.

This is the poster that "let the cat out of the bag."





Window display and magazine ads told the Self-D-Froster story.

A BORG-WARNER INDUSTRY

Refrigerators • Electric Ranges • Water Coolers • Washers
Electric Water Heaters • Home Heaters • Gas Ranges • Home Freezers

Alcott Field Engineer For Alco In New York

NEW YORK CITY—C. Wesley Alcott, Jr. has been appointed field engineer in the New York City area for the Alco Valve Co., the company announced recently. Alcott will make his headquarters in the Chanin building here.

C. W. Alcott, Jr.

A graduate of Cornell university with a mechanical engineering degree, Alcott has had extensive experience in both the service and manufacturing branches of refrigeration.

New Buffalo Concern

BUFFALO—A business name has been filed in the county clerk's office for Ted Shields Refrigeration Service, 347 Hudson, by Edward W. Shields.

Oil Burner Backlog Well Under 1947

WASHINGTON, D. C.—Only about half as many oil burners were shipped by manufacturers during January, 1948 as in January, 1947, while back orders had declined 85% below the level of a year ago, according to figures released by the U. S. Bureau of the Census.

January, 1948 shipments totaled 41,776 and were 28% under the 58,128 shipped in December. Unfilled orders at the end of January numbered 149,902, which was 40% less than the 249,902 recorded at the end of December.

Bobo Is Open Now

MACON, Ga.—The Bobo Co. has begun operations here with Frigidaire products. The firm is located at 650 Second St.

Owner of the firm is E. C. Bobo. E. F. Smith is sales manager, and H. H. Drawhorn is plumbing service manager.

Mercury Arc Furnace May Be Produced

OMAHA, Neb.—Dr. Ralph Lucas of Ackley, Iowa, inventor of a mercury arc furnace, who staged an unsuccessful demonstration of the heating unit last October in Omaha, is opening an office in the Woodmen of the World building here.

He said that the design of the furnace has been revamped since last fall's demonstration, and that he plans to have the unit manufactured in Omaha before long.

January Water Heater Sales Down from Dec.

WASHINGTON, D. C. — January shipments of electric water heaters slipped 30% below December levels, the National Electrical Manufacturers Association has reported. January shipments numbered 55,007, valued at $3,501,542, as compared with 72,411, valued at $4,741,323, in December.

With Cooling All the Way

Air Conditioning of Packaging Rooms Assures Quality In Self-Serve Meats

ORANGE, N. J. — "Pre-refrigeration" of self-service meats during not only the storage period, but while being cut and packaged and air conditioning of the pre-packaging room is the secret of preventing spoilage and cost trimming and repackaging in self-service meat operations, according to the American Store at 276 Main St. here.

One of the most important steps which has been developed, is a 3-ton packaged air conditioning unit which keeps the meat-cutting and packaging room at a steady 60° F. With all packaging materials, tools, etc., thus kept chilled, the meat stays in perfect shape during the packaging process, and is able to withstand open self-service display for as much as an hour or more longer without discoloration and the necessity to rewrap it, according to the management.

After only a few months of operation, the American Store has found that self-service meat, displayed in eight open, refrigerated cases, sells at such a rate that the meat department now does 33% of the total store volume, instead of the 26% which had been achieved by the old-style personal-service meat department.

The store devotes more than 80 ft. of wall space to self-service, prepackaged meats, and finds that actually, almost twice as much meat can be shown inasmuch as the self-service cases used are set flat against the wall of the store, doing away with the former "working area" in which butchers had to move.

Self-serve meats are "refrigerated all the way" in the new store. Meats, as received in refrigerated trucks from a local packer, are distributed into three walk-in boxes, one for beef, one for assorted fresh meats, and a third for luncheon meats. There is also a 6 x 6-ft. sharp freeze in which essential meats may be stored for long periods in perfect condition.

Meats for the self-serve cases is "requisitioned" from the storage coolers on the basis of a sales chart which shows the approximate number of pounds which will be sold per hour during the average day.

By cutting and packaging continuously, the American Store keeps the inventory of self-serve meats at a "service minimum."

Application Manual on Air Recovery Methods Now Ready for Trade

NEW YORK CITY—W. B. Connor Engineering Corp., air conditioning accessory manufacturer, has published an engineering and application data book on their Type "H" Dorex air recovery equipment which is used in the "recovery" or conversion of stale, vitiated, or contaminated air to its original freshness, either in order to conserve it for re-use or to correct exhaust and intake odor nuisances.

Dorex Type "H" equipment consists essentially of hollow-walled cylindrical canisters containing specially processed activated carbon and a manifold or supporting plate in which the canisters are secured. It can be installed in a variety of arrangements in ducts or casings to suit different conditions and requirements. Typical assembly arrangements, dimension prints, framing details, capacity and resistance curves are included in the handbook.

Using the same principle as the gas mask—adsorption of gases and vapors by activated carbon—air recovery has a number of industrial and commercial applications where a positive means of odor removal is required. However, by far the most general use is in cooling and heating installations where conservation of conditioned air either minimizes the size of heating and cooling plants or expands their capacities by reducing the volume of unconditioned outdoor ventilation air.

Copies of this new data book may be obtained by request on letterhead for Bulletin 105-A to W. B. Connor Engineering Corp., 114 East 32nd St., New York City.

NOW! Get Set to Cash In on the Terrific Untapped Room Air Conditioning Market

SELL THE AMAZINGLY SUCCESSFUL*

MITCHELL

Genuine Room Air Conditioner

A Major Appliance that's Easy to Sell, Trouble-Free and PACKED WITH PROFIT

* Acclaimed by famous Testing Laboratories, Utilities and leading experts in the Air Conditioning Field

Thousands of units in satisfying daily use

Unlimited Market for New Profits

Offices *Homes*

Every Office and Home in Your Area a Prospect

The market is *pre-sold* for you! Air Conditioning is accepted and demanded by the public. *NOW*—the MITCHELL Conditioner brings perfected, practical Air Conditioning into the *home* and *office*—to meet the vast, untapped demand for personal comfort and health. Every business house, every office building, every home of middle-class means or above—that's your market! It's unscratched—yours for the taking—and the time is NOW!

NATIONALLY ADVERTISED

Millions of prospects will read about the advantages of the MITCHELL Room Air Conditioner in *Time, Fortune, Business Week, House Beautiful, House & Garden* and other leading national publications . . . powerful advertising that sells for you.

DISTRIBUTORS:

A few desirable territories are still open. Inquiries are invited. Write for details today.

MITCHELL

AIR CONDITIONING DIVISION

MITCHELL MANUFACTURING COMPANY

2525 N. Clybourn Ave., Chicago 14, Ill.

Real 5-Function Air Conditioning Perfected...Accepted...Acclaimed

An Easy-to-Sell Appliance Package

Here are the powerful selling advantages that will make big money for you in this vast, receptive, wide-open field:

The MITCHELL Room Air Conditioner performs all 5 *essential* functions of *genuine* Air Conditioning . . . *cools, dehumidifies, filters, circulates, ventilates.* Powerful ½-ton hermetically-sealed refrigeration mechanism delivers 5780 BTU per hour (certified by U. S. Testing Co.)—nothing in the field comes close to this performance!

It's *easy* to get into the profitable Room Air Conditioning business with the MITCHELL unit. Sell it like any major appliance package. We provide simple instructions for easy calculation of installations. There's nothing to installation (unit mounts easily in window; no plumbing required; plugs in like any ordinary appliance). The barest minimum of technical knowledge is all you need to sell the MITCHELL unit successfully.

Start selling the MITCHELL Room Air Conditioner NOW. Don't wait for the "heat waves." Get in on the ground floor today. Find out how easy it is to get your share of this profitable business. Write for the full selling details. Order your floor samples early and get set for big volume sales and profits.

DEALERS! *GET SET FOR BIG SUMMER SALES.* Write for brochure, "How to Make Money Selling MITCHELL Room Air Conditioners." Get into this profitable field now. Send for details today.

AIR CONDITIONING DIVISION
MITCHELL MANUFACTURING COMPANY
2525 N. Clybourn Ave., Chicago 14, Ill.

Rush us full information on opportunity to profit quickly and easily with the MITCHELL Room Air Conditioner.

Name.....

Firm.....

Address.....

City.....State.....

Lipman
AUTOMATIC REFRIGERATION

For all types of refrigeration installations. Available in sizes ranging from ¼ thru 40 H.P.

LIPMAN units are available for use with Methyl Chloride, Ammonia and Freon 12 refrigerants. Recognized for outstanding economy and dependability, the name of LIPMAN has become the "buy" word in the commercial refrigeration field.

GENERAL REFRIGERATION
DIVISION
YATES-AMERICAN MACHINE CO., Beloit, Wisconsin

this DOUBLE BARRELLED PROFIT OPPORTUNITY

Load up your Big Sales Guns with facts, features and powerful advertising support on Hudson's Soft Drink Dispenser and Constant Pressure Carbonator. Then, swing your sights on to every fountain and bar in your territory because . . . these two sensational Hudson Products give you the greatest, double barrelled, money making opportunity of a lifetime. Start selling Hudson now.

Hudson CONSTANT PRESSURE CARBONATOR

The Hudson Constant Pressure Carbonator is unlike any carbonator ever offered. Fully automatic, yet requires no motor, pump, gears, belts or pulleys. Small, light, compact. Can be easily installed in any cooling system. Delivers 25 gallons of pure, sparkling, perfectly carbonated, correctly cooled soda per hour under 125 lbs. pressure at the draft arm. Thoroughly dependable, no let-downs at rush hours. More than 20,000 in daily use, speeding service, cutting costs, boosting fountain profits. See your Hudson Dealer for the full facts today. Quick and easy to install; only 3 connections—fresh water, CO_2 gas inlet and carbonated water outlet.

Hudson 3 and 4 WAY DISPENSER

Here's the most modern dispensing equipment available—serves 2 different soft drinks plus soda—all from a single faucet! The Hudson 3-way Dispenser for bars serves Coca Cola, gingerale and plain soda for chasers and mixers. The Hudson 4-way Dispenser for fountains, serves Coca Cola, gingerale, or any two favorite flavors plus hi and lo pressure soda for ice cream sodas. Just move the handle in the right direction and the desired drink is served—every one fresh, uniform, sparkling, perfectly cooled, correctly carbonated. Connects to two Stainless Steel syrup tanks. Mounts at any convenient point on bar or fountain. Stops waste, saves time, cuts costs and insures more profit on every drink served.

Get complete details on the Hudson Soft Drink Dispenser and the Hudson Constant Pressure Carbonator . . . learn how you can make big profits selling the most modern and efficient fountain and bar equipment ever built. Phone, write or wire today.

HUDSON QUALITY SYRUPS Hudson Service also supplies the finest syrups obtainable including Coca Cola. Other flavors are Pale Dry Gingerale, Sweet Gingerale, Orange, Lithiated Lemon, Grape, Cherry, Root Beer. Get the details on Hudson Complete Service.

HUDSON PRODUCTS CO., INC.

4400 ST. AUBIN AVE.
DETROIT, MICH.

New Detroit Supermarket Increases Staff To Keep Up with Pre-Packaged Meat Purchases

Backing up the 55½ ft. of self-serve refrigerated fresh meat display cases in the newest and twenty-second Wrigley's supermarket in Detroit is this battery of girls packaging, weighing, and pricing the meats. Nine girls are required to keep the cases filled as Detroiters take to the new idea with enthusiasm. Behind the girls are five meat cutters who operate from the large walk-in cooler just out of view on the left side of the picture.

By George M. Hanning

DETROIT—The first locally owned supermarket in the city of Detroit to offer the public refrigerated self-serve, pre-packaged fresh meats opened its doors here on March 15 and was greeted with an enthusiasm that took its operators by surprise.

"I thought I knew the possibilities of pre-packaged meats," declared Abraham Geller, manager of the meat department in the new store, "but I admit I don't know them now."

"Shoppers took to the idea as though they had been doing it all their lives. Buying pre-packaged, self-serve meats just seemed to come natural to them," he stated.

The store, twenty-second in the Wrigley supermarket chain, was opened by Jack and Nate Lurie, president and secretary-treasurer respectively of the company, with the idea of giving Detroiters the most modern methods of speedy shopping.

Indicative of the enthusiasm with which the self-serve meat department was received, according to Geller, even the butcher's union representative was satisfied that no jobs were being lost and some may even be gained by the new idea.

In addition to the 55½ linear feet of open meat display cases and 61 ft. of open dairy cases, the store features the city's first Food-O-Mat, an automatic grocery dispenser. In its 87 ft. length, the Food-O-Mat can display 2,000 grocery items in orderly array and at the finger tips of the shopper.

As fast as a customer takes one item from the inclined shelves of the Food-O-Mat a gravity feed shute replaces it with another. If the customer decides she does not want the item after she has taken it, she merely deposits it in a return slot at the bottom of the machine.

The Food-O-Mat is loaded from the rear, thus keeping grocery clerks and food cartons out of the customers' path.

When the customer enters the store she is confronted first with the Food-O-Mat. It extends the full length of the store. From the Food-O-Mat she is led naturally into an aisle along the rear of the store which is lined on both sides with open refrigerated meat cases.

At the end of this aisle, she is turned toward the front of the building and has a wall of refrigerated delicatessen and dairy cases on her right and two aisles of produce displays on her left.

Following the dairy cases to the front of the store, she passes three Hussmann frozen food display cabi-

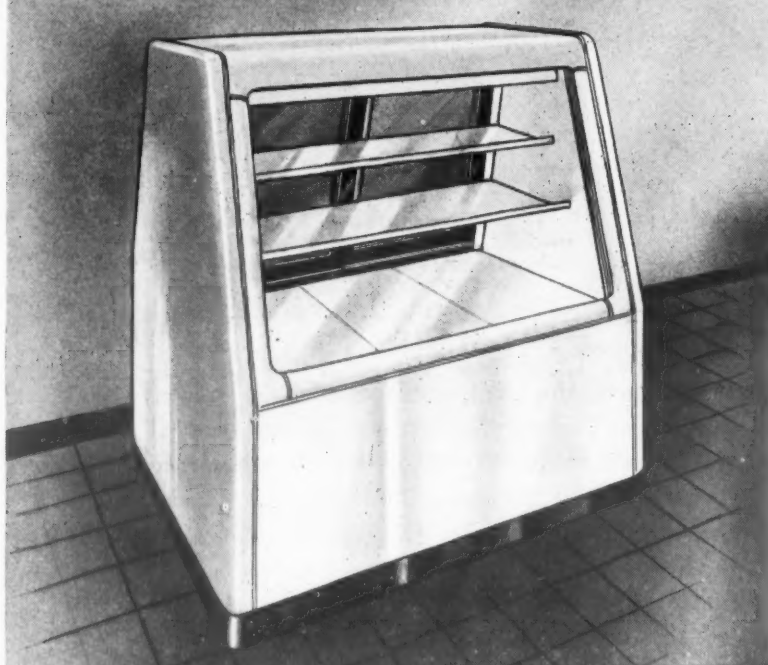
(Concluded on next page)

Sixty-one feet of refrigerated dairy and delicatessen cases offer the customer a wide variety of products to choose from and give her plenty of room in which to make her choice.

These three frozen food display cases are the last in the line of refrigerated displays to hit the customer's eye before she checks out her purchases.

NOW the Case that 1/2 MILLION MERCHANTS HAVE BEEN WAITING FOR!!

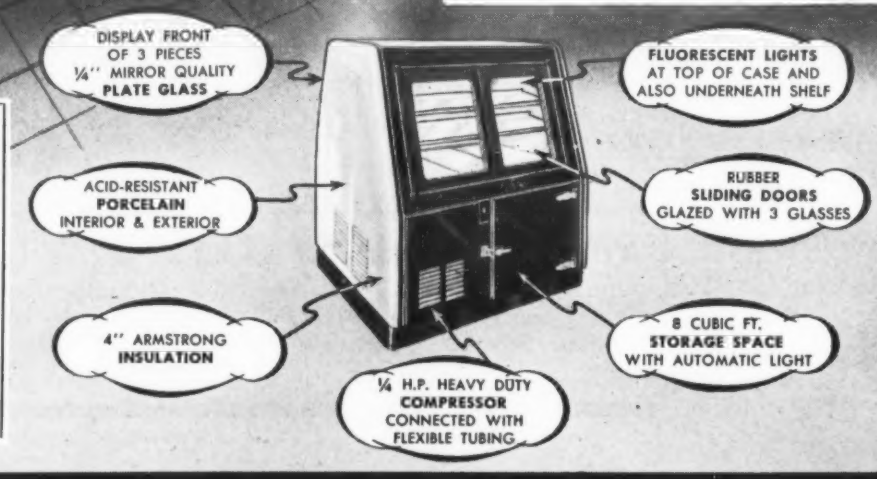
"COLDISPLAY" by Bally the 51 INCH ALL PURPOSE DISPLAY CASE WITH COMPRESSOR BUILT-IN



Ideal for
DELICATESSENS
BAKERIES
RESTAURANTS
TAPROOMS
FLORISTS
DINERS
CONFECTIONERS

LOOK WHAT THIS CASE HAS!

21 cu. ft. capacity. 15 sq. ft. shelf display. 8 cu. ft. concealed storage area. Entire exterior and interior of display section made of genuine ACID RESISTANT PORCELAIN. Display front glazed with 3 pieces ¼ inch mirror quality plate glass. Rubber sliding doors—4 inch insulation—with the same specifications and construction that have for years made the name BALLY famous for quality. Case is equipped with a heavy duty ¼ H.P. compressor with a temperature control having a manual adustment. Case equipped with an 8 foot cord ready to plug into nearest light receptacle.

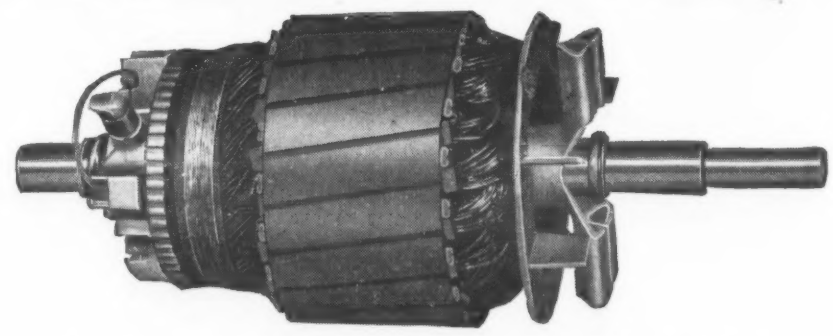

DISPLAY FRONT OF 3 PIECES ¼" MIRROR QUALITY PLATE GLASS
FLUORESCENT LIGHTS AT TOP OF CASE AND ALSO UNDERNEATH SHELF
ACID-RESISTANT PORCELAIN INTERIOR & EXTERIOR
RUBBER SLIDING DOORS GLAZED WITH 3 GLASSES
4" ARMSTRONG INSULATION
8 CUBIC FT. STORAGE SPACE WITH AUTOMATIC LIGHT
¼ H.P. HEAVY DUTY COMPRESSOR CONNECTED WITH FLEXIBLE TUBING

"COLDISPLAY" will be advertised nationally in trade magazines circulated to
FLORISTS BAKERS
GROCERS BUTCHERS
RESTAURANTS TAPROOMS
DRUG FOUNTAINS
If you are in a territory where the BALLY LINE is not being sold write for
EXCLUSIVE FRANCHISE

BALLY CASE & COOLER CO.
MAIN OFFICE & FACTORY
BALLY, PENNA.

Genuine Joe says "Don't be Slow..."

Keep small motors moving out *fast!* Stock Wagner Motor Armatures"



It's easy to repair small motors when you have a supply of Wagner *Ready-To-Use* Armatures on hand. Three simple steps . . . and the job is done.

1. Remove old armature.
2. Install a *complete* new Wagner armature.
3. Test the motor and ship it out.

Keep genuine Wagner Motor Armatures in stock, and release your winders for more profitable work on the larger sized jobs.

AUTHORIZED Wagner Electric Motor Repair Parts SERVICE

Order them today from any of the 450 Authorized Service Stations or Parts Distributors displaying these signs.

AUTHORIZED WAGNER MOTOR REPAIR PARTS DEALER

Write for CATALOG MU-40
Every repair shop needs one. It helps determine the catalog number and price of Wagner Motor Parts.

Wagner Electric Corporation EST. 1891

6441 PLYMOUTH AVENUE
ST. LOUIS 14, MO., U.S.A.

MS48-2

ELECTRICAL AND AUTOMOTIVE PRODUCTS

Housewife Can Make 'Budget' Selections Easier from Ready-To-Go Meat Packages

(Concluded from preceding page)

nets just before she reaches the check out stand.

This is the Wrigley step-saver shopping system.

The frozen food cases were installed by Detroiter Refrigerator Mfg. Co. here. All the other fixtures were made by the Almor Co., another local concern.

These latter are porcelain faced in a cream shade and are slanted toward the bottom so that the shoping buggies cannot mar the finish, according to Morris Mersky, partner in the Almor Co.

Almor also inserted the Peerless coils in the refrigerated cases, putting one set behind the backboard mirror and the other beneath the pans holding the meats or dairy products.

Refrigeration equipment for the display cases was sold and installed by the Talbert-Thomas Co., refrigeration contractors here. According to George Murphree, service manager of the firm, the 61 ft. of dairy and delicatessen cases are refrigerated by a 5-hp. York condensing unit. The open meat cases and an 8 ft. standard type fish case are hooked onto another 5-hp. York unit.

This sales equipment is backed up by a 14 by 20 ft. walk-in cooler for meats, a 7 by 12 ft. dairy and delicatessen walk-in, and a 12 by 18 ft. vegetable walk-in. The meat cooler is refrigerated by one 2-hp. York unit and the other two walk-ins are cooled by another York condensing unit of the same size.

McQuay fin coils are used throughout in the walk-ins. The walk-in boxes were made by the Chrysler and Koppin Co. here.

Temperatures maintained are 33 to 35° F. in the meat walk-in, 38 to 40° F. in the dairy and delicatessen box, and 40 to 45° F. in the vegetable cooler. Similar temperatures are maintained in the display cases. The fish case is held at 30° F. to keep the chipped ice from melting and caking.

Geller, the meat department manager, is very enthusiastic over his set up. He has now four other meat cutters and preparers, nine girls who wrap and weigh the meat, and one hostess, who greets customers, helps them get special cuts to order, and who checks on the cases to see that they are kept filled.

When the store opened, Geller had only himself, another meat preparer, five girl wrappers, and the hostess. But before the first week was out he was forced to expand his staff to its present strength in order to keep up with the increasing demand, he said.

One of the reasons for the shoppers' ready acceptance of prepackaged meats, Geller believes, is that this method saves them the embarrassment of having a butcher weigh up a fine piece of meat only to find that it exceeds their meat budget.

"This way," Geller said, "the customer knows how much she wants to spend and can readily determine from the price marked on each package whether she can afford it or not without having anyone interfere with her selection. By having a variety of cuts in different sizes in front of her, she also has a wider choice of how she will divide her budget money to get the different types of meat she wants.

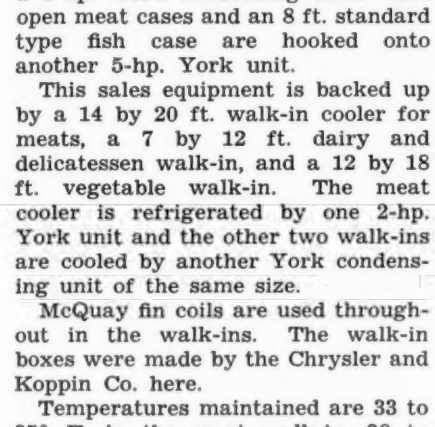
"On Monday, normally a slow day," Geller averred, "we did 30% of the store's business. Usually we do about 20%. However, the fact that our department is still pretty much of a novelty may have had something to do with this good showing."

Pre-packaging meats offers other definite advantages to the store, too, he stated. Meat held at close to 33° in the walk-in cooler can be cut up and packaged before its temperature rises very much. And then, wrapped in cellophane and held at about 33 to 35° F., it can be kept on display for 72 hours without losing its color and fresh look. That improves its chances of sale tremendously, he said.

Geller believes that pre-packaged meat offers interesting challenges to the butcher. He is approaching his job with an open mind and a determination not to be bound by traditional methods of cutting and preparing meat.

"Pre-packaging requires new ideas in meat cutting," he declared, "and I am willing to try anything that I think will work."

This double row of self-serve refrigerated cases crammed full with prepackaged fresh meats extends the full width of the newest Wrigley supermarket in Detroit.



Lehigh BLU-COLD COMMERCIAL REFRIGERATION

Package Units
Heavy Duty Air and Water Cooled Units

Lehigh Mfg. Co.
Plant: Lancaster, Pa.

Export Department, 160 Broadway New York, N. Y.

NEW UNIT COOLER

ONE OF THE BIG THREE OF 1948

BACK VIEW

SIDE VIEW

● This is the streamlined beauty with motor mounted in the center of its Round Coil—the new Peerless "Pie Plate" where all the primary and secondary surface is IN THE AIR STREAM. The fans are round—why should coils be square? Even the return bends on this coil are in the air stream. There is no waste surface. The Unit Cooler is a condensed package of refrigeration power, occupying small space for capacities given. Unfailing mechanical performance creates gentle air velocities for dependably efficient cooling, producing superior performance at minimum operating cost. Installation is an easily accomplished, one-man job. For use in all types of fixtures and walk-in coolers where general refrigeration is required. Complete with built-in heat exchanger and suction spinner.

Model No.	List Price	Capacities B.T.U. per Hr. at Given T.D. Between Air and Refrigerant			Motor and Fan Characteristics				Overall Dimensions Including Motor			Connections		
		1°	10°	20°	Motor H.P.	R.P.M.	Fan Size	C.F.M. Capacity	Height	Width	Depth	Liquid	Suction	Drain
66	$59.15	65	650	1300	1/100	1550	8	210	13	11⅞	6½	½	½	½
96	70.50	95	950	1900	1/100	1550	8	200	13	11⅞	8	½	½	½
126	80.00	125	1250	2500	1/100	1550	10	350	15	13⅞	8	½	½	½
226	110.45	225	2250	4500	1/30	1000	12	540	18¼	17⅛	8½	½	½	½
326	130.00	325	3250	6500	1/30	1000	12	500	18¼	17⅛	10	½	½	½
456	160.00	450	4500	9000	1/30	1000	16	1050	21⅜	20¼	11	½	⅝	½
606	190.00	600	6000	12000	1/30	1000	16	1000	21⅜	20¼	14	½	⅝	⅝
906	248.00	900	9000	18000	1/6	1140	20	1800	30	28½	12	½	¾	⅝
1256	326.00	1250	12000	24000	1/6	1140	20	1700	30	28½	15	½	¾	⅝
1856	387.00	1850	18500	37000	1/6	1140	24	3000	42½	41	13½	½	1" O.D.	⅝
2456	460.00	2450	24500	49000	1/6	1140	24	2800	42½	41	16½	½	1" O.D.	⅝

ENGINEERING DATA ABOVE
FOR BOX TEMPERATURES ABOVE 32°
FOR USE WITH FREON, METHYL CHLORIDE AND SULPHUR AS REFRIGERANT

PEERLESS of AMERICA, Inc.
2901 LAWRENCE AVE. CHICAGO 25, ILLINOIS, U. S. A.

FORMER UNION MEMBER HITS CIO LEADERSHIP

E. Savage Co.
50 E. Barclay St.
Hicksville, L. I., New York

Editor:

I have had access to your paper for several years and last October, when I became manager of this branch, I subscribed for myself.

If for no other reason, I greatly value your paper for the editorials and Inside Dope column. The column for March 8 should be sent to every union leader in the country. As a former member of the C.I.O.-U.A.W. I fought constanly for both sides of the issues and practiced what I preached. I have always found most men, and women who were willing to work for a living were reluctant to be domineered by a few people who weren't working for their living. On the whole, the unions did more harm than good to the war effort. Largely due to the union, the airplane engine plant in which I worked became a glorified W.P.A. project.

Keep up the good work. I wish your column could get in some large newspapers but the unions wouldn't like that.

WALTER WIEBALDT,
Manager

AN ADDED STARTER IN STORIES ON ENGLISHMEN

The Augustan Garage
Cobleskill, N. Y.

Editor:

I like your "Inside Dope" column. In the March 29 issue you placed a question mark after the item on English Humor, "Are you amused?" Frankly, *no*. I must admit, however, that the stories you carried were "clean," if you like 'em that way.

However, it brought to mind one that illustrates to a certain extent the English ability to "get" the point.

It seems that an American lad, finishing his schooling at Oxford, became quite chummy with an English boy from London. At graduation the London boy suggested to the American lad that they take a motor trip through England countryside so that the American would go home with a better idea of England, etc.

So they started out, covering even the side roads. One afternoon they suddenly realized they had lost their way. They continued on until they came to a cross road where there was a sign post which read "26 Miles to Manchester, 40 Miles to Dover." Someone had written below: "If you can't read, ask the blacksmith."

The American laughed and they continued on their way, finally reaching London.

Not to be outdone, the American lad prevailed upon the English boy to go along to America with him and see the wonders of our great country. About the third day out, while the two of them were exercising on deck, the English boy suddenly started laughing. The American lad, seeing nothing to laugh at asked the English lad to explain. The English boy said, "do you remember the day on our trip when we were lost and came to the sign where someone had written: 'If you can't read, ask the blacksmith?'"

The American lad replied, "Yes, what about it?"

"I say, old chap, supposing the blacksmith wasn't home?"

EARL T. TINKELPAUGH

P. S. Reading the letter just written, it would seem I was interested only in the "Inside Dope" and the humorous stories.

Not so, for I enjoy the whole paper. It keeps us awake and helps us realize that the product we sell is not necessarily the "finest" on the market and that competitors, too, have points deserving of the customers' interest.

It is like attending a weekly convention.

ANOTHER READER FINDS STORIES AT VARIANCE

The Resinous Products Co.
Chicago, Ill.

Editor:

I finished reading "One Foot in the Door" quite some time ago, having interrupted no less a luminary than one John Gunther in order to do so. I forthwith offer my humble evaluation.

I thoroughly enjoyed the book (especially the stories, of course) and so did my family and anyone else I could find to listen. As I read, I would jot down the page numbers, and then read to all comers, and believe me, they eagerly awaited each story.

There's a story on pp 197-8 and that ain't the way I heerd it. The way I heerd it, a man obviously under the affluence of inkohol was riding on a bus through Pennsylvania, and came to a settlement of Dunkards. A pastor, complete with long hair and beard, got on the bus. He seen his duty and he done it.

"Sir," he warned, shaking the drunk by the shoulders. "You are seeking destruction. By the vine ye shall perish. Eschew this curse, and follow the paths of righteousness henceforth."

Opening one eye and surveying his unwelcome tormentor, the stew retorted:

"Who're you?"

"I'm a Dunkard Pastor," said the minister.

"So'm I a drunken bastard," answered the stew, "but at least I take time out to get a haircut and shave once in a while."

Besides the stories themselves, there were a few other things I noticed—about style. In some instances, the way a story is told surpasses the story itself. For example, I just love the one about Algernon because of the wording, especially this part: "His mother couldn't do a damn thing about it. It was just *there*, that's all."

Some of these stories have anti-climaxes almost as good as the punch line. Best example of this, I think, is the first one I mentioned. Also, I like this one following the story about the orange juice INSTEAD OF: "Advertising is like that. There just isn't any substitute."

There are loads of "Winchellisms" that I like—"pacing lobby" (or "nervous ward") of a maternity hospital. "Feeling-no-painers dining at a Manhattan snoberies." "Six-percent husband," referring to the skinflint banker.

I'm undoubtedly not your severest critic, but here's a slight censure just to prevent your becoming too conceited with all this praise. On page 312 you have two characters. One is the Juke from Dubuque, the other Paddy from Paducah. Now don't you think he should be the Palooka from Paducah?

D. ZEIGLER

WORKING MAN DISCOVERS 'PROPAGANDA' IN NEWS

20003 Fremont Ave.
Seattle 33, Wash.

Editor:

Please remove my name from your mailing list.

News is great. Wish I knew some really reliable source that was not infested with NAM propaganda. There are some antidotes I am aware, but they are too radical in the other direction.

I cannot pass over your sly reference to OPA News, economic misinformation, etc.

My personal opinion is that if you and your masters the manufacturers, had not done such a thorough job of wrecking OPA (with all its faults) today the dollar I earn would be worth twice as much as its present 40 cent value and I, along with all working men would be in a position to buy the new appliances we need. As matters are, we do well to eat. Had enough? I have.

DONALD L. NELSON

FINDS EDITOR NEEDS AN EXTRA 'FLYWHEEL'

975 Wilshire Blvd.
Los Angeles 14, Calif.

Editor:

Most people need only one flywheel. I think you need two.

Am not going so far as to suggest that you use the first while writing your own obituary—and then use the second to fasten around your neck and jump into the nearest mill pond. If you come up—I'm wrong.

ROY CONRAD

MORE DISTRIBUTION FOR 'WAISTLINES' EDITORIAL

International Harvester Co.
539-549 East St. Germain St.
St. Cloud, Minn.

Editor:

May we have permission to make reprint in whole or in part of your editorial "Waistlines Will Be Leaner in 1948 for People Who Don't Own Home Freezers." We wish to make distribution of these reprints to our dealer organization.

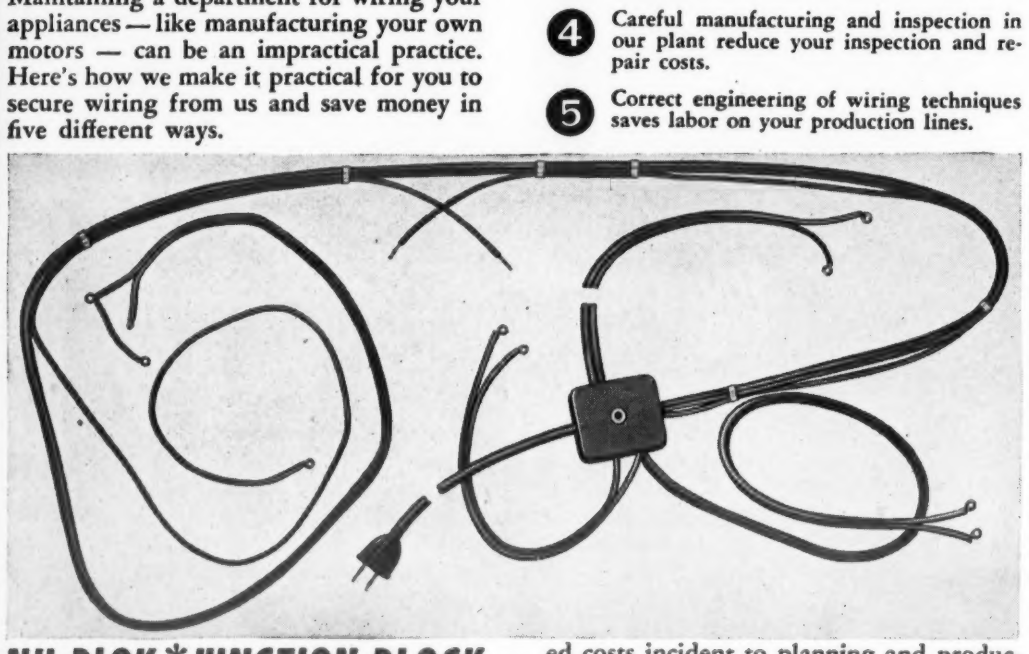
M. H. JOHNSON,
Wholesale Refrigeration
Representative

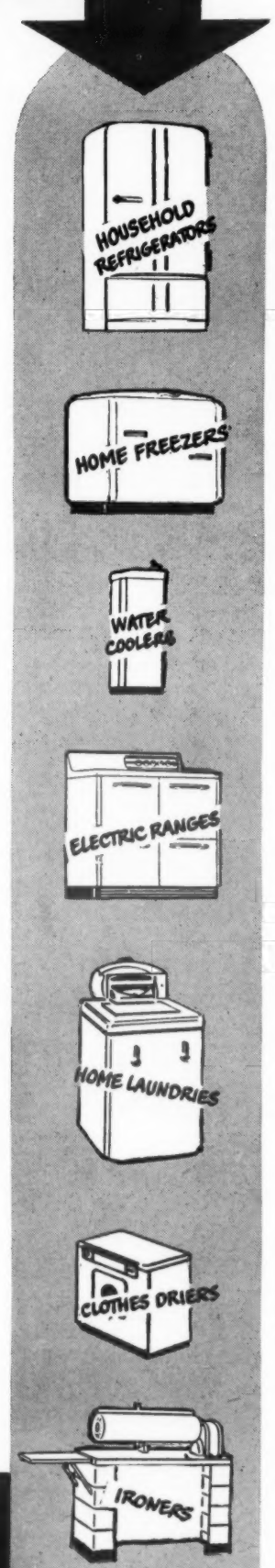
IF YOU MAKE ANY OF THESE...

YOU'LL CUT WIRING COSTS 5 WAYS BY USING ENGINEERED PRE-FAB WIRING UNITS

Maintaining a department for wiring your appliances — like manufacturing your own motors — can be an impractical practice. Here's how we make it practical for you to secure wiring from us and save money in five different ways.

1. By mass producing wiring assemblies for many manufacturers, we effect savings not possible for individual manufacturers.
2. By meeting delivery schedules we save you losses from production stoppages.
3. High quality standards, maintained in our manufacture, protect your product quality standards.
4. Careful manufacturing and inspection in our plant reduce your inspection and repair costs.
5. Correct engineering of wiring techniques saves labor on your production lines.





NU-BLOK *JUNCTION BLOCK ISOLATES SPLICES, SAVES MATERIAL AND LABOR COSTS, RAISES QUALITY STANDARDS

This new feature of Pre-fab wiring units (illustrated in above assembly) frequently saves more than $100.00 per thousand assemblies when applicable. Sturdily built, it minimizes breakage, eliminates costly terminals, taping of splices and danger of short circuits due to faulty soldering and stray strands. Designed specifically for use in wiring portable refrigeration equipment, the NU-BLOK* is adaptable to many other appliances.

CONSIDER THESE IMPORTANT WIRING COST FACTORS

When you use Pre-fab wiring units you purchase complete assemblies instead of a large number of component parts. You pay only for those units that are accepted by your inspection department. You eliminate spoilage, repairs and many unrecorded costs incident to planning and production of a specialized item not within your usual manufacturing procedure.

POWER CORDS AND SINGLE LEADS

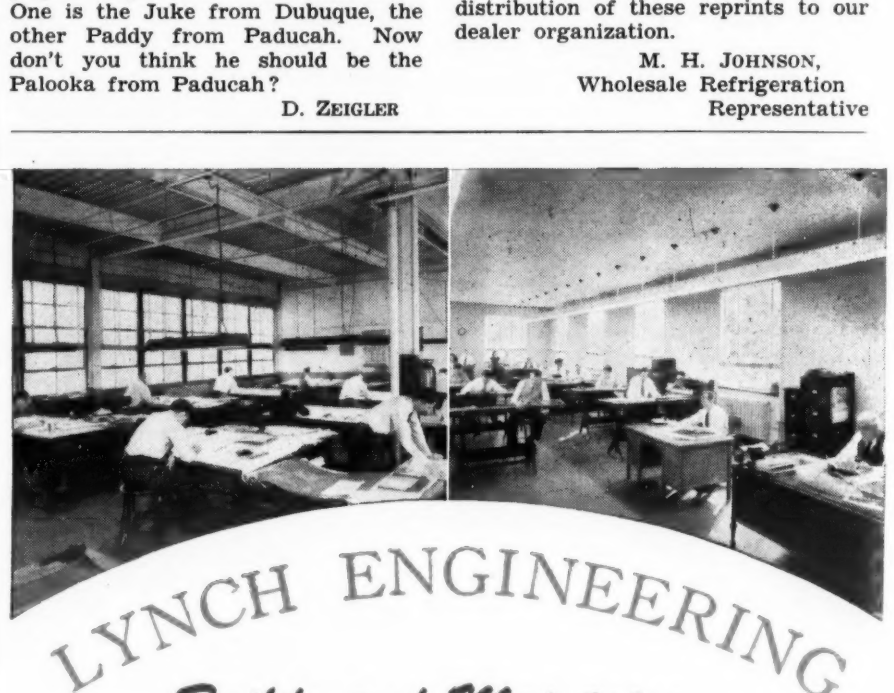
Where wiring cannot be assembled into one complete unit, we can supply separate power cords, compressor cords, thermostat cords, lighting circuit assemblies, with automatic door switches, sockets and other essential components.

ENGINEERING AND COST ESTIMATE SERVICE

Whether you are now purchasing wiring assemblies from outside sources, or making your own, send us your blueprints or wiring diagrams and samples of your present wiring units. Our engineers will estimate costs based on your specifications and offer suggestions, where indicated, to lower your costs and improve the efficiency of your wiring. *Trade mark. *Pat. applied for.

Detroit Office
512 DONOVAN BLDG. • RANDOLPH 5214
Los Angeles Office
5225 WILSHIRE BLVD. • WEBSTER 3-4779
Representation open in several territories.

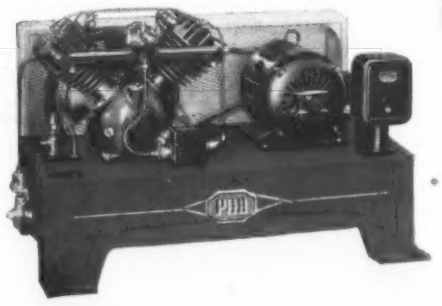
United MFG. and SERVICE COMPANY
783 NORTH WATER STREET
MILWAUKEE 2, WISCONSIN



LYNCH ENGINEERING

Builds and Maintains . . .

DEPENDABLE PAR SERVICE



Lynch Engineers, working in all-modern engineering departments equipped with the latest type precision instruments, keep a continual check on Par performance. Always striving to build greater efficiency, more dependable service into every Par Condensing Unit . . . your assurance that when you buy Par, you buy years of engineering skill that is reflected in economical, efficient performance and extra years of dependable service. That's why—"By Comparison—They Buy Par."

Ask your Par Wholesaler for complete details and specifications on the Par line of condensing units or write direct for Par Catalog R-99.

By Comparison — You'll Buy PAR

LYNCH CORPORATION
Par Compressor Division TOLEDO 1, OHIO U.S.A.

Fixture Dealers Debate What Is Needed To Spur Sales and Improve Salesmen

Also Argue Whether Cash Is 'Cash Now' Or 'Anytime Within 90 Days'

By George M. Hanning

DETROIT—"There's still plenty of commercial refrigeration and food store equipment business to be had. The dealer just needs to push himself out of his swivel chair and go out and get it. It won't come to him any more."

That opinion, voiced by one local dealer, keynoted a recent bull session among members of the Food Equipment Dealers Association here on what they could do to meet stiffening consumer resistance.

"While I was in Florida," this dealer related, "I kept getting word from my salesmen about how terrible business was. When I got back I found that the business was still here. They were just too lazy to go out and get it."

"We have had no trouble finding business," a representative of a large scales firm chimed in. "We just have to hustle a little harder, that's all. Its getting to be more like old times."

A young commercial refrigeration salesman observed that "education of the grocer is the only way to make sales."

Grocers, as a rule, he indicated, are not too well informed on the values that good equipment can give them. They need to be educated by the salesman before they can be sold.

Not Peddling Shelving

"You can't walk in on a grocer and sell him a meat case as a meat case or display shelves as display shelves," he said. "He has to be taught how they can be used to earn him more money and bring more trade into his store."

"That's right," another member broke in, "if you can educate the man how he can make more money with his equipment, he won't worry so much about the price tag. I can see no reason why at this time we should take a cut in our profit when we don't have to. If we sell on the basis of what our merchandise will do for him and not on the price tag, we can all make a fair profit.

"The merchant really doesn't care about the price tag," a veteran refrigeration and display equipment dealer emphasized. "All he is really interested in is 'Will this equipment do the job for me?' What difference does it make what it costs as long as the merchant is going to make money by using it?"

'Build Up' the Prospect

"Educating the grocer is a fine thing," another old timer cautioned, "but you can't do it by taking a superior, patronizing attitude toward him. You've got to build him up and make him think he is an important man in his community, that he is doing an important job. Make friends with him.

"Once you make friends with your customer, you will find that education will follow easily. If he doesn't consider you a friend, he won't believe what you tell him. If he does and thinks that you are sincerely trying to help him, he will gladly take your advice. And buy your equipment.

"Incidentally, when we are looking for business, we contact our old customers. That advice applies more to those who have been in business for five years or longer. Go back and see those old customers. You will be surprised how much business you will find there."

"That's really good advice," a butcher supply salesman declared. "We contact our old users regularly and they give us no end of prospects. As satisfied users of our product, they think they are doing the other fellow a favor by getting him to buy one."

"We're wise to you guys," another scale man chuckled. "You want us to go chasing after our old customers, while you grab off all the new ones!"

When the laughter had settled down, the old timer began again.

"The first impression a salesman makes on a customer is very important. He must sense, before he says a word, just how he should approach a particular customer. Should he smoke in front of him, should he be reserved, or should he be informal? All those things have a lot to do with the customer's attitude toward you and your product.

"I have seen salesmen leave a very bad impression with a customer even though they represented good firms that make excellent merchandise. If he isn't favorably impressed, the merchant may listen to you, but he won't buy.

"Real sales training is learned pretty much through experience. It represents more than just how to sell. It means how to sell particular people under particular conditions."

"What I want to know," another dealer queried, "is what do you fellows consider cash. To me cash is cash right now. On the barrell head. But I just lost an order today because the customer wanted 90 days cash.

"I told him 90 days wasn't cash. It was 90 days terms. But he argued that for all his other equipment he was getting 90 days cash. And my scales were equipment, weren't they? What could I say to that?"

How To Define 'Cash'

A storm of discussion broke over that one, but the generally agreed answer was offered by the president of the organization in this way:

"Cash is whatever you want to define it to be. As an independent businessman you can make it whatever you like. And you can't tell the other fellow what his should be.

"In my business, cash is one third down, and one third of the balance each month for three months. Of course, that is on orders that involve a considerable outlay of money. I wouldn't do that on an order of $100 or so. Then cash is cash now or within 30 days.

"The governing criterion is normally the size of the order placed."

Another scale dealer interjected that a salesman was crazy not to take 90 days cash on an order of, say, $1,000.

"For the profit you make on an order of that size, you can well afford to sacrifice the little bit of interest you would be losing," he said. "Besides, with a third down and a third of the balance in 30 days you have more than half your money collected within a month."

"Anyway, when things start getting real tough again, you will find the big boys will be offering cash terms for payment in nine months or a year."

"If you need the money right away," the chairman added, "consult your banker. You will be surprised at what low rates you can get money on short term loans."

sell the cabinet that's designed to sell MORE FROZEN FOODS

The GOODSELL MODEL SS8 FROZEN FOOD DISPLAYER is designed to meet the needs of the independent food merchant.

HERE'S PROOF:

1. REFRIGERATED DISPLAY WINDOW for display of opened up packages. Attracts attention. Stimulates impulse buying.
2. SELF CONTAINED 1/3 H.P. CONDENSING UNIT mounted beside display window, does not take up floor space.
3. SLIDING GLASS LIDS, which may be removed during busy hours. Greater accessibility to food.
4. Goodsell OVERHEAD COILING avoids rapid softening of the top layer of food.
5. LOW OPERATING and MAINTENANCE COST.
6. 21 CU. FT. CAPACITY—holds 700 average packages of food.
7. CABINET ONLY 68" LONG — requires very small floor area.

Write for descriptive folder

GOODSELL CORPORATION
1820 FLUSHING AVE., BROOKLYN 6, N.Y.
Evergreen 7-4064

IT'S MY CHOICE AND I'M IN THE BUSINESS

"Yes, servicing refrigerators, I see all kinds in my day's work . . . and the new KOCH 25-Cu. Ft. Stainless Steel Reach-In Refrigerator is my choice.

"It's a beauty with its glistening stainless steel cabinet, but that stainless steel does a lot more than add to the appearance of the KOCH Reach-In Refrigerator. It's welded into one unit to make a rigid self-supporting cabinet.

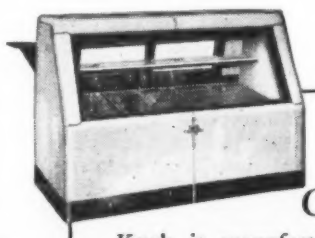
"That means that no wood has to be used for framework and support. Insulation is continuous—even around the doors, and that makes the KOCH Refrigerator 100% effective. No cold can get away.

"Owners of these new KOCH Reach-In Refrigerators tell me that they cost less to operate and that they provide more usable refrigerator space—25 cubic feet—in just nine square feet of floor space.

"And dependable? You bet. I figure that any product Uncle Sam selected to meet battle conditions aboard warships has what it takes to give real service."

Here is your chance to solve your refrigeration problems, effectively! Yes, you store more food at lower cost with the new KOCH 25-Cu. Ft. Stainless Steel Reach-In Refrigerator. It's now available.

The Koch 25-Cu. Ft. Reach-In Refrigerator is now available with or without an ice-maker. You can freeze a full load of 216 cubes (21 pounds of ice) in a remarkably short time...real convenience!



Once Again...

Koch is manufacturing the popular 6-ft. long double duty display case. It's a companion to current 10 and 12-ft. models. . . . Don't delay, write KOCH today for complete information.

KOCH Refrigerators

"KOCH IS TOP NOTCH"

NORTH KANSAS CITY, MISSOURI

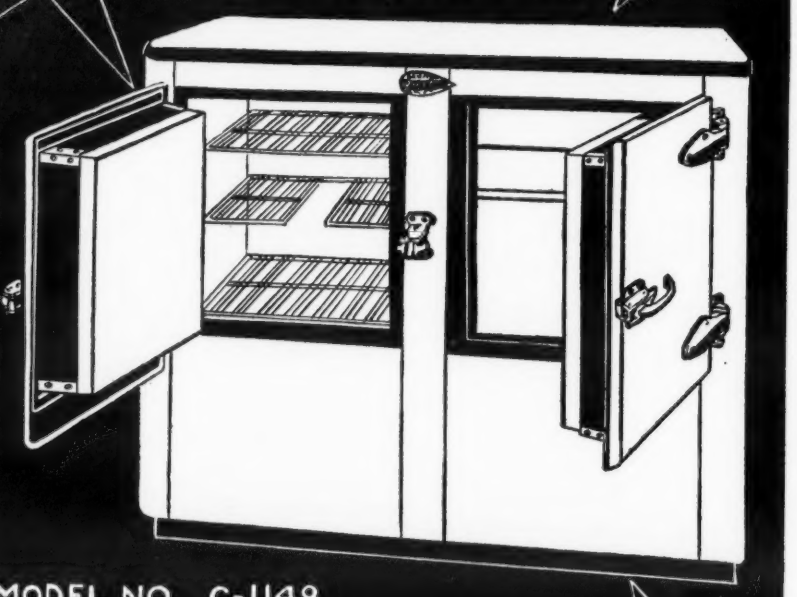
SINCE 1883

Quicfrez TRIZONE

NORMAL REFRIG. TEMP.

FAST FREEZE

SANITARY'S PREWAR COMBINATION
Farm Freezer is again available for immediate shipment..... Suggested consumer price only $399.50.....



MODEL NO. C-1148

4½ cu.ft. of 35-50 F. Refrigeration combined with 6¼ cu.ft. of zero frozen storage.
Size: 48½"w. x 28"D. x 40¾"H.
Frozen meat capacity - 250-300lbs.
¼ H.P. hermetic, quiet-type condensing unit
60 cycle 115 volts A.C.

FROZEN STORAGE

SANITARY REFRIGERATOR CO. FOND DU LAC, WIS.
ICE REFRIGERATORS FOR MORE THAN 40 YEARS FARM FREEZERS SINCE 1939

Separate Showrooms Will Keep Trade-Ins From Hurting Sale of 'New' Refrigerators

Dealer Uses 'Formula' for Selling Reconditioned Units

ATLANTA — "Unless the dealer sets up a separate showroom, and reconditions trade-in refrigerators for profitable resale, he is headed for trouble," says Robert Shelley, head of Robert Shelley Electrical Appliance Co. here.

The Shelley organization, one of the largest appliance dealerships in the Georgia metropolis, has been working on the trade-in problem for more than a year, preparing to return to the time when four out of five sales of electric refrigerators will involve a trade-in.

"That may seem like an exceedingly high figure," Shelley said. "Yet in 1941, our books show that four out of every five sales we made included the headache of making an allowance for a trade-in, reconditioning it, and selling it again."

The "shop around" attitude is definitely a problem to contend with in refrigerator merchandising, Shelley demonstrated. "Nearly every customer who comes in searching for a refrigerator nowadays, feels convinced that all brands will give excellent service, and look instead to find out who will give them the best deal on a trade-in," he pointed out. "For a time, perhaps, due to the high sales price of new refrigerators, it will be possible to make large allowances, but this cannot last for long."

The Shelley concern's "formula" for solving the trade-in problem is based on a series of points, which are:

1. *Fair Allowance*—The customer must be allowed enough that her first impression is not that the dealer is "trying to rob her." The allowance should take into consideration the cost of appearance and mechanical renovation, and the probable sales appeal of a box when resold.

2. *Ample Reconditioning Facilities*—The old system of "piecework" repairs of refrigerators, one man handling the entire job, is far too costly in view of the high cost of skilled mechanic labor, parts, etc., according to Shelley. Therefore, the dealer must set up a plant which can recondition large numbers of refrigerators simultaneously, holding cost down and yet turning out a satisfactory box which will be sold with a guarantee which means something to the housewife.

3. *Separate Space for Displaying Rebuilt Trade-Ins*—Even though the dealer may be tempted to show his reconditioned boxes on the same sales floor with new appliances, in order to have something to sell to customers who are discouraged by the current inflated prices for new equipment, it is far wiser to spot them somewhere else, according to the Atlanta dealer. If the store is large enough, the reconditioned refrigerator department should be set up in the basement, on an upper floor, or somewhere where it is entirely screened away from new refrigerators, he indicated.

"The sight of a bunch of reconditioned boxes alongside of new ones is bound to have a bad effect on new-merchandise sales volume," he indicated.

Shelley's has done all of these things, and is beginning to accept trade-ins regularly on new refrigerator sales. However, mindful of the high mortality rate which the trade-in problem caused among dealers before the war, Shelley believes that ultimately the best answer would be setting up of a central refrigerator reconditioning shop for all dealers.

Space Quadrupled

Chicago Store Moves Appliance Section Up Where 35% Can See It

CHICAGO — Goldblatt Bros. has placed its major appliance section on the first floor in the formal opening of the modernized department in one of its neighborhood stores.

The section was formerly located in the rear of an annex building across from the multiple-story main store. It had been placed behind the furniture section. It is understood sales volume on appliances had been considerably below the average in other Goldblatt stores.

The present location is in the triangle section of the main building with a display window visible for approximately two blocks down a main thoroughfare. It is estimated that 35% of the customers entering the store do so through the door which leads into the appliance section.

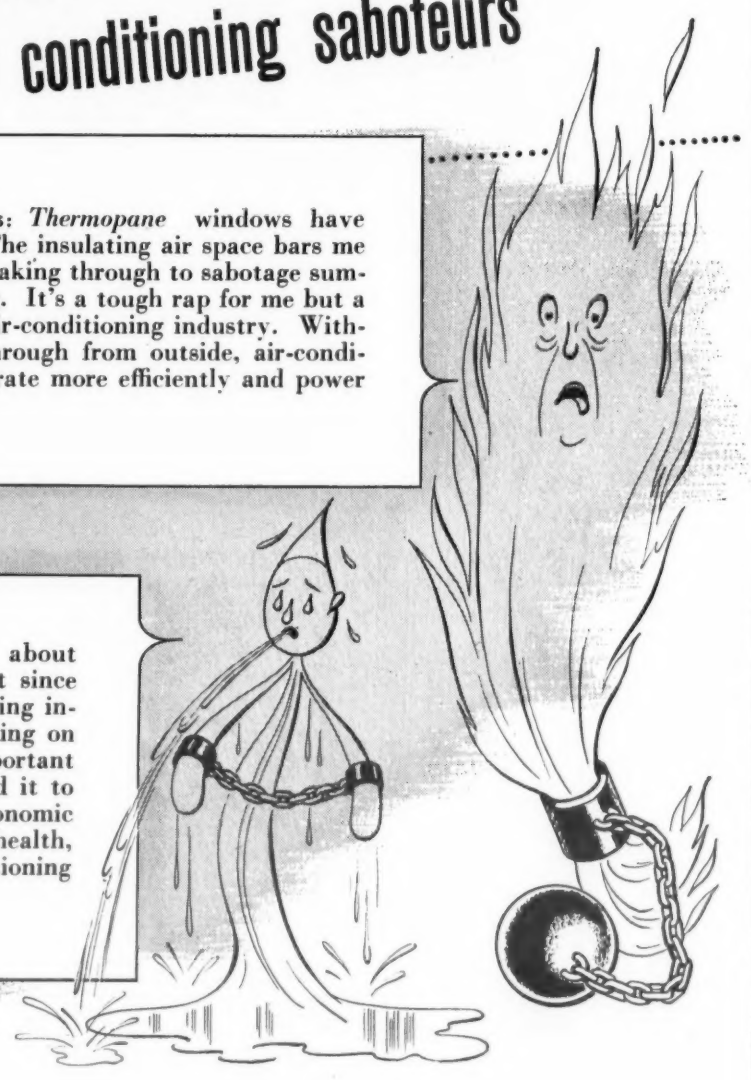
Stan Reinherz, major appliance buyer, expects volume to do an about face from what it has been, bringing the store section up to the leaders of the chain.

The department features an operating kitchen, a wall of operating refrigerators, another section for gas and electric ranges, and a group of home laundry equipment with automatic washers that are also in operation.

The new section occupies approximately 2,200 sq. ft. of space or an estimated four times the former location.

A PUBLIC CONFESSION . . . about *Thermopane* by two air conditioning saboteurs

OUTSIDE HEAT says: *Thermopane* windows have me stopped cold. The insulating air space bars me from completely breaking through to sabotage summer air conditioning. It's a tough rap for me but a real break for the air-conditioning industry. Without my sneaking through from outside, air-conditioning systems operate more efficiently and power costs are reduced.



CONDENSATION admits: I used to brag about being Air Conditioning Enemy No. 1. But since more and more *Thermopane* windows are being installed, I confess I have a tough time forming on inside glass surfaces. That's a highly important factor to year-round air conditioning. Hand it to *Thermopane*—it permits more accurate and economic control of proper humidities so necessary for health, comfort and efficient operation of air-conditioning equipment.

*Thermopane** helps the air conditioning contractor sell his equipment. These advantages make *Thermopane* a valuable aid to air conditioning:

1. Reduces heat infiltration through glass. Sealed-in air between the panes of glass serves as an insulator. *Bondermetic* (metal-to-glass) *Seal* keeps dirt and moisture from entering the air space.
2. Permits air circulation without excessive downdrafts at windows.
3. Permits wider latitude in humidity control because condensation on glass is minimized.
4. Increases air-conditioning efficiency by keeping the inner pane more nearly at room temperature.
5. Year-round, double-glass protection.

The trend is to *Thermopane*, and it's ready for prompt delivery. You can obtain helpful information on this glass insulating unit by writing for Don Graf's Technical Sheets on *Thermopane*. Libbey · Owens · Ford Glass Company, 1748 Nicholas Building, Toledo 3, Ohio. *®

Cutaway view of double *Thermopane* showing insulating air space and *Bondermetic Seal*.

ONLY LIBBEY-OWENS-FORD MAKES *Thermopane*

LIBBEY · OWENS · FORD
a Great Name in GLASS

Launder-Ease Promotion On Planning Service Evokes 350 Inquiries

DETROIT—The plan for a self-service laundry consulting, planning and purchasing service has drawn more than 350 "prospect" inquiries from all parts of the country since initial promotion was started a little more than two months ago, it is reported by A. L. Hanson, president of the Launder-Ease Sales Corp.

At the present time the Launder-Ease Sales Corp. has representatives covering the entire east with sales offices in New York, Boston, Detroit, Washington, St. Louis. An office in the South will be established soon.

Work in the field already has resulted in the opening of five Launder-Ease stores and the opening of at least 40 more during the next three months is expected, Hanson said.

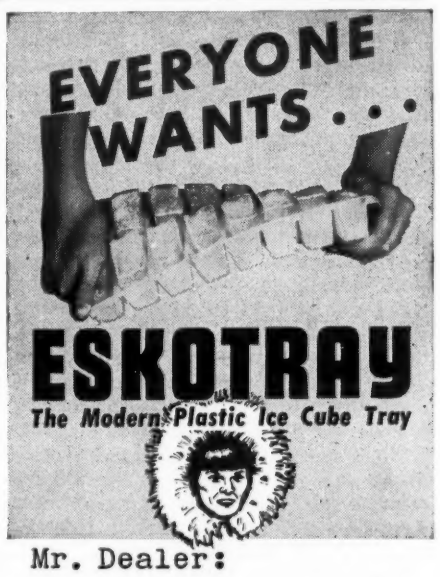
The Launder-Ease plan, Hanson explained, is based on a self-service laundry planning and purchasing service.

"The organization," he said "furnishes the prospective operator with complete store layouts which vary with the number of automatic washing machines to be employed. These diagrams have been tested and present the most economical and satisfactory arrangement for a self-service washing center. They include recreational features, soft-drink vending facilities, and similar attractions.

"The organization also acts as a purchasing agent for the Launderall automatic washing machine, gas or oil fired water heaters, extractors, and dryers. In addition, we are in a position to supply detergent, paper bags, tickets, and all equipment necessary for complete operation. This equipment, of course, is supplied at a discount from the retail price. A complete equipment service course, directed by factory trained personnel, is also offered."

Hanson said that the Launder-Ease Sales Corp. estimates a capital expenditure of $10-$12,000 for a completely-equipped store.

EVERYONE WANTS . . .



ESKOTRAY
The Modern Plastic Ice Cube Tray

Mr. Dealer:

1948 IS ESKOTRAY YEAR!

We have merchandised ESKOTRAY, from raw material to the freezing compartment of Mrs. Smith's refrigerator, to sell and sell. Quick convenient ice cubes.... truly....at a twist of the wrist! Priced for activity, discounted for liberal dealer profits, packaged and displayed for eye appeal ESKOTRAY sells and repeats because your customers will be ESKOTRAY'S best advertisers.

Order now from your jobber or address your inquiries to us.

Yours very truly,
B. G. Mills
Sales Manager
ASSOCIATED PLASTIC COMPANIES, INC.
201 N. WELLS ST. CHICAGO 6, ILLINOIS

COUNTER DISPLAY PACKED IN EACH ONE DOZEN CARTON.
AD MATS ON REQUEST

Top Men In General Motors Dayton Divisions

M. M. ROBERTS

E. R. GODFREY

Appointment of E. R. Godfrey as group executive in charge of the Dayton and Household Appliance Divisions of General Motors Corp. and Mason M. Roberts as general manager of the Frigidaire Division were announced recently by C. E. Wilson, president of General Motors.

Appliance Center's Sales Record Shows Value Of Night Selling and Adequate Demonstrations

PORTLAND, Ore. — The question of whether or not it is wise to keep an appliance dealership open in the evening is resoundingly answered by Harold Kelly Appliance Center here —a store which sold a million dollar sales volume during 1947, with 70% of it "after the dinner hour."

The Kelly Appliance Center opened up in 1944, when Owner Kelly teamed up with H. T. Ward, formerly promotion manager for Stubbs Electric Co. here, and combined two stores. Along with franchising several leading lines, and hiring veteran appliance salesmen, Kelly opened up a complete service department, with four veteran refrigeration servicemen, which he has plugged consistently in promotion.

After dinner selling hours are ideal in the appliance business, says Kelly, because it is probably the only opportunity the dealer has of getting husband and wife together. Moreover, he points out, appliance prospects coming in between the hours of 6 and 9 p.m. are usually relaxed, comfortable, and have enjoyed a good meal, which puts them in a pleasant frame of mind.

Therefore, the Kelly Appliance Center has kept open until 9 p.m. since the day it opened, and due to the heavy patronage of people who drive into a convenient parking lot next door, the store sold more than a million dollars worth of appliances with a staff of only three salesmen, which has since been increased to eight.

"You've got to make an appliance call a pleasant experience for both customers and salespeople before maximum sales benefits can be derived," Kelly says. "Therefore, we have spent plenty of time in training every salesman to be able to cook a meal, operate automatic laundry equipment, and to sit down and get out an ironing if necessary.

"Each one of my men is an actual expert on the appliance he sells, and we encourage them to make a social event out of a prospect call—putting each machine through its paces, giving the housewife and husband a wack at it, and in every way, making the evening enjoyable."

Such proficiency on the part of salesmen is obtained by holding regular sales meetings, at least twice a week, during which laggards at learning are given a chance to work with more versatile men. The result is such all-round usefulness in the appliance store, that it is not unusual for a Kelly Appliance Center salesman to make a sale involving five or more appliances at once.

"We've found that this friendly, social atmosphere not only helps to clinch sales on the spot, but induces our customers to send their friends around," Kelly grinned. "Frequently, we have people come in who have been sent in entirely by the enthusiasm of their friends. That's the best kind of goodwill, and it translates readily into sales volume."

Perhaps the most clever stunt which has been worked out by Kelly is his "rainy day telephone promotion."

Whenever it is raining hard, and the store has few patrons in it, salesmen sit down and telephone everybody who has been previously sold a washing machine—telling them that they ought to also purchase a drier. A surprisingly large volume of driers have been sold over the telephone in this way.

Dept. Store Sales Up 9% over Last Year For Week Ended Mar. 20

WASHINGTON, D. C. — Department stores in every Federal Reserve district in the country, sharing in the pre-Easter buying activities, showed increases in their sales for the week ending March 20 as compared with the corresponding week of 1947, the Federal Reserve Board has reported. The national average increase was 9%.

For the four weeks ending on March 20 and for the year ending on the same date, national sales were up 6%.

Percentage gains for the week by Federal Reserve districts are: Boston 5, New York 3, Philadelphia 9, Cleveland 12, Richmond 7, Atlanta 19, Chicago 9, St. Louis 16, Kansas City 17, Dallas 19, and San Francisco 5.

February Vacuum Sales Up 2% over 1947 Month

CHICAGO — Manufacturers of standard size household vacuum cleaners sold 311,342 units in February, a 2% gain over January and a 14% gain over February of last year, C. G. Frantz, secretary-treasurer of the Vacuum Cleaner Manufacturers Association, has announced.

For the first two months of this year, factory sales are 15.7% above January and February last year, which was the biggest year in the industry's history, he added.

He noted that 304,273 units were sold in January, 615,615 for January and February. Last year 272,907 units were sold in February and 531,753 in the first two months.

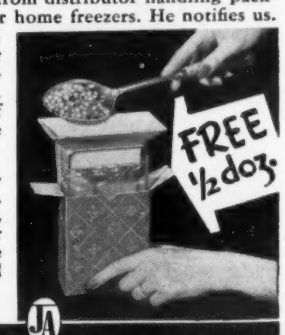
The number of vacuum cleaners sold in the first two months of this year exceeded a third of all units sold in 1941, the industry's best prewar year, he said.

Again, in '48
WE REPEAT THIS OFFER
$7.50 BONUS

Make Over 46% Profit On Initial Order of CARTON FILLERS

● Order 4 dozen from distributor handling packaging materials for home freezers. He notifies us. We send you ½ dozen with your first order. Plus advertising material. Specify name of carton you are handling.

CARTON FILLERS save time, prevent torn liners, keep liners dry for sealing and assure uniformly filled packages.



JEWETT ASSOCIATES
1053 MAIN ST., BUFFALO, N. Y.

FREEZ-RITE'S New Baby

DESIGNED & MANUFACTURED FOR THE SMALL MERCHANT
●
GUARANTEED TO STAY SUB ZERO
●
DISTRIBUTORS & DEALERS INQUIRIES INVITED

Display • Serve • Sell

MODEL FD8

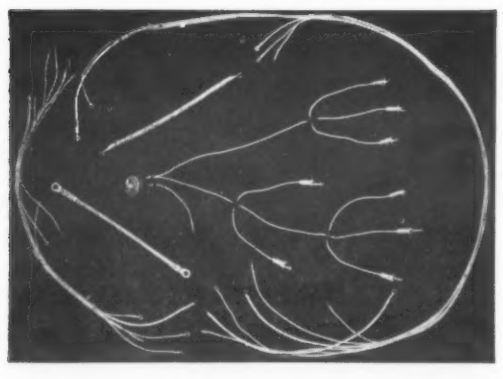
FREEZ-RITE INC. 8040 Second Ave., Detroit 2, Mich., TR 1-0630

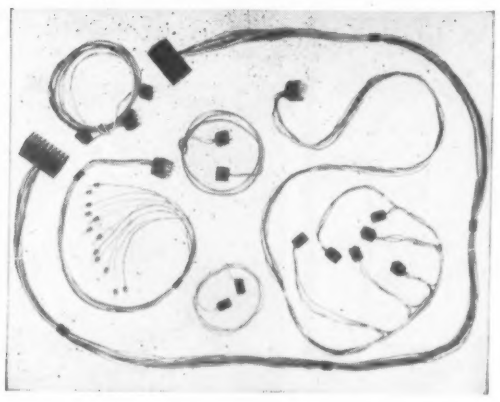
FOR *your* WIRING HARNESSES and DEVICES

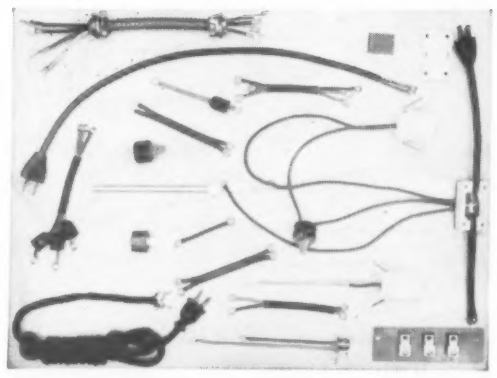
RIVERSIDE OFFERS

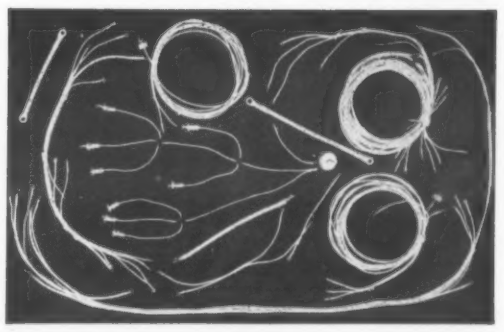
PRODUCTION MANUFACTURING ADVANTAGES

● DESIGNED AND PRODUCED TO YOUR SPECIFICATIONS
● FREE ENGINEERING SERVICE
● IMMEDIATE DELIVERY

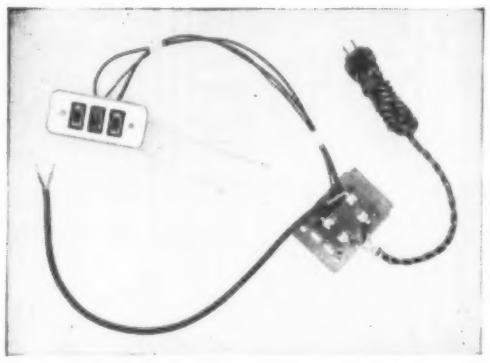


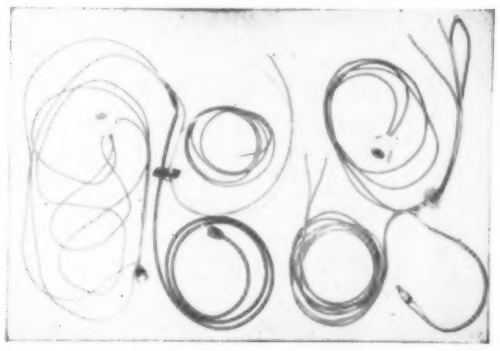


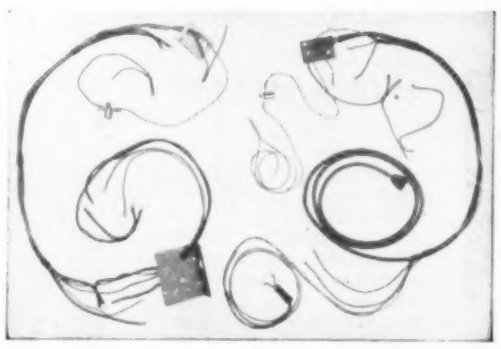




FOR
REFRIGERATORS
WASHING MACHINES
AUTOMOBILES







FOR
ELECTRIC RANGES
APPLIANCES
RADIOS

INSULATED WIRE CUT AND STRIPPED TO YOUR SPECIFICATIONS. CORD SETS, HEATER CORDS AND EXTENSION CORDS.
SEND US YOUR PRINT OR SAMPLE.

RIVERSIDE MANUFACTURING CO.

200 S. RIVER STREET Phone 288-2934-3175 YPSILANTI, MICHIGAN

INSIDE DOPE

by GEORGE F. TAUBENECK

(Continued from Page 1, Column 1)

Who Are You, Anyway?

Happiness depends on so many different things; and upon so many intricate combinations of emotions, satisfactions, hopes, and possessions, that none of us can figure out why somebody acts like he does.

That's why changing a System won't make people happier. Under any System there will always be dissidents and critics. The changes made after every revolution simply make a new set of people unhappy.

(And the congenital gripers, of course, we always have with us.)

No Planner can be aware of the entire range of human wants and needs. He can plan to eradicate some evils; but in so doing he is sure to create others. And *personal* human happiness is always secondary to his Master Plan.

Were I a dictator, for example, I'd abolish amateur hunting and fishing, as being cruel and wasteful. It just happens that I don't enjoy fishing and hunting. But thousands do. And, no doubt, if these pastimes were abolished, the country in time might be hip-deep in alligators, deer, rabbits, trout, and wall-eyed pike.

I'd abolish bridge-playing, too, if I were a dictator, on the ground that it's a waste of time and a source of dissension. But if some other dictator abolished poker and baseball, I'd be sore as hell.

See what we mean?

Mass Selfishness

In fine, each person should be given all the room possible for the pursuit of happiness, *his kind* of happiness.

When dissatisfied elements agree that there should be a national Plan, or a new economic System, they actually are demanding that their kind of happiness should predominate.

This is Intolerance of the most selfish sort.

Planners, Socialists, and Communists are simply selfish dreamers who, if allowed to, would make life a nightmare for the rest of us.

Why Planning Isn't Democratic

Democracy is majority rule on *as few questions as possible.* It implies minorities. It lets the most people protection for, and tolerance of, decide the most questions.

But Planning is intolerant. The longer it exists, the more questions it must decide. And it can survive only through dictatorship (i.e.; deciding *all* questions). Illustration:

Ever serve on a committee? If so, you'll understand how difficult it is to get any assembly of persons to agree on anything. Committee decisions are compromises, unless the committee is dominated by an unusually strong character. (Even then, many members will go away niff-knawing from the committee meeting.)

But important decisions on the national-planning scale can't be compromised. They must be all of one piece, like a bridge. Change a few details, and the whole she-bang collapses.

Under Planning, then, minorities must control majorities, and even be intolerant of them—the reverse of democracy. In the end, a dictator imposes his personal will and his limited understanding upon all his ruled subjects. They suffer in consequence.

Only when governing Power is expressly limited and jealously confined can most people find happiness in their own way.

Why Planning Leads To Emotional Insecurity

We have seen that a primary appeal of Planning, Socialism, and Communism is its promise of "security." In an Age of Confusion, the thought of having something to "tie to" comes as a relief to those who nurse an anxiety neurosis.

Yet, State Planning has the opposite effect on the individual after he's in its clutches. The State Planners make it almost impossible for any person to guide his own activities. He can't "tie to" anything because he never knows when the "party line" will veer, or to where.

No one knows when he'll be thrown into a concentration camp for what he said last week. No one knows what his money or goods will be worth next week. (Example: Russia's unprecedentedly drastic devaluation of the ruble in January, 1948.)

No one knows where he stands with the Ruling Powers from one day to the next.

The incidence of mental diseases under Communism must be frightful.

When the Plan is the important thing, rather than People, some are thrown into jail for doing what others receive medals and extra rations for doing.

As the planning becomes more complex, the bureaucracy which administers the dictator's plans gets bigger and bigger. Its decisions become less and less uniform, and more and more prone to whim and caprice.

Result: the rifest insecurity imaginable.

Why Planning Leads To Economic Insecurity

Most compelling of the neurotic reasons why the dissatisfied bow low before the Golden Calf of Planning is their yearning for recognition of their personal worth.

Yet, under the Planners, their egoes would take a beating.

In America, it's possible to change jobs, if one doesn't pay you as much—in dollars or satisfaction—as you think you should have. And you can shop at another store if one charges too much or the clerks are surly.

In a Planned Society you're at the mercy of the governors. You work where you're told, at a government-fixed price. And you exchange your wages for what the governors decide you should have—whether or not you want those things, or desire something else in exchange for your paychecks.

The Planners can decide that bookkeepers shouldn't own automobiles (which may be reserved for bureaucrats). They can decide that white collar workers shouldn't eat meat (which is reserved for manual laborers). And they can decide that feminine white collar workers shouldn't have husbands (they are reserved for female farm and factory workers). All these things have happened in Russia and Germany at times.

The Planners can tell you what to do and what not to do. A boy who had intended to be an architect may be forced into the coal mines. A girl who has dreamed of a stage career may be assigned to cleaning subway latrines.

No one can be sure of doing what they want to do. They must do what the Planners and their minions, the bureaucrats, order them to do.

If that isn't the worst type of insecurity, what is?

Why Planning Leads To Stagnation

Making both ends meet is a day-to-day worry common to most of us. When passing by the tempting food displays in a cafeteria you often hear the bromide: "my eyes are too big for my stomach." Or, in any office building elevator you're likely to hear another cliche: "How can I support a champagne appetite on a beer income?"

In America, as elsewhere on a lesser scale, our appetites are unsatiable.

Capitalism has made various attempts to spread its surplus earnings amongst the faithful and deserving, so that they can consume more. High wages, employe stock acquisition, bonus arrangements, and profit-sharing schemes have been tried with sporadic success. Implied is the assumption that higher earnings will be matched by greater production.

But under Communism no such possibility exists. Since everyone owns everything, in theory, there are no more boons to be shared. Workers reason:

"If I loaf tomorrow, what can I lose? I own only one hundred-and-fifty-millionth of the national income."

So they take it easy. The odds are unattractive.

This same lassitude applies to the sub-administrators of a Planned State. They take life easy, too; and they pass the buck because no one wants to accept responsibility for okaying an innovation which might not turn out well.

Moreover, the okaying of a suggested improvement would be admitting that the way they had been doing things in the past wasn't good enough. And that admission might cause them to lose their jobs (or their heads!).

Men as well as machines become obsolete and worn-out, eventually. But neither is replaced under a socialistic regime unless they collapse. It's too much trouble, costs too much, and goes against the grain of too many people to rearrange prearranged routine, install advanced equipment, and to acquire the fresh knowledge called for by a reshuffle of the cards.

Omnipotent governments stagnate a land because few citizens have a personal stake in their success. They just ride along with the tide, accepting stolidly a pushing-around, instead of pushing their own private objectives. They have little incentive to exert themselves, to eliminate waste motions, or to try something different.

Sluggish and unenterprising, scared and reticent, the sub-administrators and their sub-sub administered drudges slowly succumb to red-tape, routine, and retrogression. In time, the entire nation rolls over and plays dead. Its civil servants made the nation over into a fetid, stagnant morass of January swamp-molasses.

Why Planning Is Bad News for Small Business

Everyone has grievances, particularly those who think of themselves as "little fellows." In this class are many small businessmen. (I'm one, myself, and so are my partners.)

Seventy-leven times a day a small businessman rages against the odds. He needs more working capital; but bankers apparently lend money only to those who don't need it. His bigger competitors buy more cheaply, hire more easily, and sell more powerfully. How can he buck them? He's eager for talented help; but the best brains seem to gravitate toward the big corporations.

(Continued on next page)

United's New **GLASS DOOR** *Reach-In*

- Stainless steel interior
- Greater shelf area per cubic foot
- Adjustable shelves of heavy plated wire
- White Dulux finish baked on Bonderized, rust-proof auto body steel
- 3½ inch thick approved insulation throughout
- Sizes for every need: 44 cu. ft., 34 cu. ft., 25 cu. ft.

It's a beauty!
- FOR APPEARANCE
- FOR PERFORMANCE
- FOR ECONOMY
- FOR CONVENIENCE

...It's a United!

Illustrated model RI-44-BVG 44.3 cu. ft. Reach-In. Available with low velocity, high humidity blower or 288 cube ice-cube maker cooling unit. Glass doors optional. Remote or self-contained.

A Complete Line for Every Commercial Need!

25 CU. FT. REACH-IN

Model RI-25C. Self-contained 25.2 gross capacity reach-in with 28.3 sq. ft. of adjustable shelf area, 6 tray ice-cube maker or blower cooler. Same construction features as above model except not available with glass doors.

34 CU. FT. REACH-IN

Model RI-34 BV. Remote or self-contained 33.7 gross capacity reach-in with 27.6 sq. ft. of adjustable shelf area, ice-cube maker or blower cooler. Available with glass or plain doors. Same construction features as above model.

Write for information on United's complete line

REACH-INS • BOTTLE COOLERS • WALK-INS • ICE-CUBE MAKERS • BEVERAGE DISPENSERS

United REFRIGERATOR COMPANY

350 ROBERT STREET • ST. PAUL 1, MINN.

The **NAT PACKAGED**

Self Contained AIR CONDITIONER

EASY TO INSTALL — ECONOMICAL IN UPKEEP

The Nat Air-conditioning Unit is the only one on the market so constructed as to be easily serviced.

The Answer to the Service-Man's Prayer

All working parts are accessible without having to tear down the cabinet.

The NAT comes in 3 sizes: 3.3, 4.2 and 5.4 Tons

The LAST WORD in Appearance and Performance

Sold through exclusive dealers and distributors some territory still open — inquiries invited

The **NAT** *Corporation*

2710 McGee Trafficway • Phone HA. 1892 • KANSAS CITY, MISSOURI

The Nat Corporation also manufactures the NAT Suspended Gas-Fired Unit Heater

INSIDE DOPE

by GEORGE F. TAUBENECK

(Continued from preceding page)

How can he compete against the giants?

It's no wonder that some discouraged small businessmen figure that Big Government ought to protect and subsidize them. They're dancing off on the wrong foot, however, when they run to Mama. Eventually and inevitably, Big Government either crushes small businesses, or forces them to consolidate with larger combines.

The Planners promise to eradicate the diseases which eat into small businesses; but then they kill the patient—or aggravate the disease.

In their quest for simplification, the Planners always seem to fluff off small business, despite their mealy-mouthed protestations of loyalty to the "little fellow." They just can't be bothered with minisculities.

The bigger the unit or segment, the simpler it is to control. And the smaller, the more bothersome and annoying.

Why Planning Is Antagonistic to Christianity

"Thou shalt have no other gods," thundered the Mosaic Jehovah. Equally uncompromising are the Planners, Socialists, and Communists.

All religions are jealous and mutually exclusive. "He who is not with me is against me." Indubitably, Planning and Christianity are incompatible. They can't possibly live side-by-side without friction.

Planning is inherently materialistic. It's ideas are those of Moloch. Christianity is unselfish. Its ideals are those of Christ.

Christianity glorifies each individual. Planning defies the Plan.

Planning derives its impetus from class hatred. Christianity teaches men to love one another, and to forgive.

Karl Marx was an avowed atheist, as his son-in-law, Dr. Edward Aveling, has testified in his writings. So was Lenin, and so is Stalin. Christianity, they recognized, was their most potent rival in the sphere of emotional ideology.

Communism has been recognized by the Catholic Church as the devil incarnate. Perhaps no cleric has contrasted Catholicism and Communism more succienctly than an Archbishop Glennon of St. Louis, who once summed up the modern Heaven-Hell controversy in this manner:

Say the Communists: "There is no God and no such thing as an immortal soul. Therefore there is no future life. Man has only his life in this world to live."

The Catholics say: "God exists, the Creator, ruler and loving father of us all. Every man and woman has an immortal soul. This life is only a training and testing for a future life of greater happiness which we may all hope some time to attain."

Communism asserts: "The individual is of no importance. Only the community matters; and everything is valued solely by whether it is useful to the community or not."

The Catholics answer: "Every individual is of infinite value; we are all brothers in God's great family, with duties to Him and our neighbors. The community exists to help individuals to lead worthy lives; the individual precedes the community and must not be sacrificed for it without due cause."

The Communists say: "No individual has 'rights' apart from the community. He counts but as a cog-wheel in the state machine and can be 'scrapped' whenever necessary."

The Catholics maintain: "Every individual has 'rights' to life, to due sustenance, to reasonable freedom and to such happiness as is reasonably attainable; these rights imply duties to serve God and to assist the state and his neighbors as far as lies in his power."

The Communists affirm: "No individual has any right to indisoluble marriage, to the control or education of his children, to the ownership of property, to worship publicly, to spread his religion, or to express opinion on the policy of his rulers."

The Catholics assert: "Every individual has a right to his share of God's bounty, and it is the duty of the community to see that none shall lack what is necessary. Every man and woman has a right to matrimony and the care of a family; to the use of such property as they can acquire; to the education and control of their children; to free association with their neighbors; to a voice in the public policy; to the worship of God in accordance with the teachings of the faith."

The Communists hold: "The ideal is a state in which all goods are produced, owned and distributed by officials, in which all think alike, wherein religion is discarded, wherein 'right' and 'wrong' are simply expressions for the service or disservice of the community."

The Catholics reply: "The state should be organized as far as possible for the benefit of individuals; private property should be distributed as widely as possible, and all citizens should be encouraged to be free and secure and God-fearing."

The Communists say: "All power must be concentrated at any cost of compulsion, even by torture and massacre, in the 'dictatorship of the proletariat' as directed and expressed by the Communist Party; all opposition or criticizing bodies being swept out of the way; this dictatorship to be continued as long as the Communist Party shall think desirable."

The Catholics retort: "All men and women should do what they can by good example, by careful study of social ills and their sound remedies, by steady pressure on the ruling powers, to correct the evils of our day, to make it easier to follow right rather than wrong, and to spread far and wide the inspiring tenets of the faith."

This eloquent presentation of the teachings of Catholicism, contrasted with the crude and cruel principles of Communism, is a second declaration of independence from tyranny and brutality.

After having gone this far in our scrupulously fair dialecticism, even a child should agree that no communist principle can be accepted by any American of any Chrisitian faith, whether he be Catholic or Protestant.

It is obviously impossible to be both a loyal American and a Communist. The Communists are loyal to Russia, and "man cannot serve two masters."

In fact, we doubt that any sane person can be a civilized and enlightened human being when he endorses the implications of Government Planning.

Why Planning Destroys The Highest Instincts

Outside of the latter-day contemplative saints, like St. Thomas Aquinas and Mahatma Gandhi, sons of Adam whiff the Divine Fragrance only through their personal love of children.

"Suffer the little children," said Christ, "and forbid them not."

Most fathers and mothers have feet of clay. But when they look at their trusting offspring, they can become almost noble. No sacrifice is too great when their children are involved.

Man's love for a child, even one not his own, is his most unselfish instinct.

But Communists, Socialists and Planners pigeon-hole the upbringing of children into the usual oversimplified category. Communist kids are reared on an assembly-line basis, so that they'll adhere to the "party line" when they become adults. Here's the blueprint:

No mother shall have a child to love and nurture; no father shall support his own. Just breed 'em and forget 'em. The State takes over from there. That's the Planners' song-and-dance relative to children.

Instead of caring for, loving, and bringing up gently your own child, you hand him over to the nearest Bureau for Indoctrinating Small Fry, if you're a citizen of a Planned State. You pay the taxes, and the bureaucrats do the rest.

How to Breed Juvenile Delinquents

Undoubtedly "as the twig is bent, so the tree is inclined."

Indifferent nurses and teachers, helpless and bereft parents, spineless children . . .O! my God!

Would YOU want a government Bureau of Parenthood to raise YOUR child? Well, that's what you're voting for when you approve socialistic Planning.

Man's one connection with the Infinite—his unselfish devotion to his child—can be snapped asunder like a severed thread by socialism-in-action. And then—no fooling—back he returns to servility and bestiality. From the ordered relinquishing of loving parenthood it's but a step to commanded breeding. State Planners must control population increases or decreases lest their statistics get out of hand. After studying the birth charts, a Planner can order:

"You, sir, are at stud. And you, and you, and you women must become pregnant this month."

When the Planners guarantee "full employment" they must be sure that no child is born without their consent. Otherwise, their statistical projections might be askew.

Women of the world: Unite!

The Procrustean Bed

Every school-child knows that no two sets of finger-prints are identical. This is a fascinating confirmation of the righteousness of individualism. When no two human beings have identical finger-prints, it's obvious that no two psyches will be alike. The Good Lord, in his infinite wisdom and mercy, creates each boy and girl different and *distinct* from all others.

In the end, this is what defeats Planning, Socialism, and Communism.

But before the Planners are licked, they wreck lives and even civilizations because they presume to buck God's purpose.

Planning, in essence, is oversimplification. (That's its major lure for the incompetent). Oversimplification irons out differences, with a vengeance. Congenitally, oversimplification creates more troubles than it disposes.

Men and women, each of whom is different and distinctive, bother the oversimplifying master Planners. The latter are more at home with statistics than they are with people.

To make Plans workable, people must be jammed into similar molds and grooves; and to do that, the Planners have to be taught, hard-hearted, inhuman, and even sadistic. When they call the tune, dance in rigid patterns. They must all check in at prescribed hours, look alike, act alike, and think alike—especially the latter. Hirohito's Japanese even had "thought control" police.

Thus endeth spectacular innovations, far-reaching inventions, and unexpected progress—all of which are sired by the irregular and the non-conformists.

And thus endeth also the communist fallacy—in time. Without the infusion of new blood and new ideas, any revolutionary movement will collapse of its own top-heavy weight.

In the last several years a considerable number of idealistic evangelists for Planning have recanted.

Either they've lived in Germany or Russia—and not liked it—or they've been smart enough to make wise deductions at a distance. They have reversed themselves eloquently, and some of them have somersaulted spectacularly.

Gist of their revised opinions about Planning:

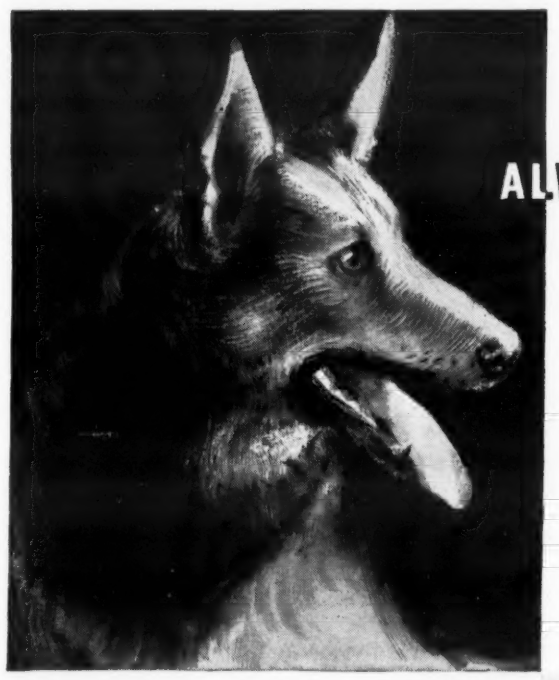
One shouldn't have to choose between poverty and progress. One shouldn't have to choose between culture and bread, either. But it's far better to make your own choices than to have them made for you by self-appointed thugs.

From monopolistic government (and on this they all agree) there is no escape.

Unravelling problems is mankind's curse and duty. But in trying to avoid perplexities by shifting the burden of pondering and worrying to Big Government, we prevent ourselves from choosing anything, deciding anything, or even doing anything.

And, say these fervent reformed Reformers, there's nothing worse.

Planning, they are trying to tell us, fails to foster prosperity, security, or happiness. As a way to a better life, it's the worst swindle of all time.



ALWAYS
ALERT
TO GUARD
EVAPORATOR EFFICIENCY:
ALCO THERMO VALVES

The large diaphragm makes Alco Thermo Valves instantly responsive to slight changes in superheat.

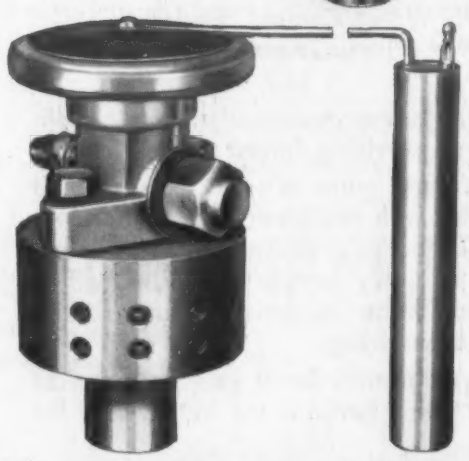
- **Precision-built for easy interchangeability of parts.**
- **Minimum moving parts for less friction, less wear.**
- **Rugged, corrosion-proof internal parts.**
- **Cupped diaphragm removes weld from flexing area—prevents loss of thermal charge.**

All these features assure a sensitive control that gives dependable service year after year.

Wide choice of capacities: ¼ to 50 tons, "Freon-12", ½ to 100 tons, methyl chloride. Multi-outlet valve gives choice of 2 to 36 outlets.

Get Bulletin 171 for single outlet, 180 for multi-outlet.

Available at your nearest Alco wholesaler.



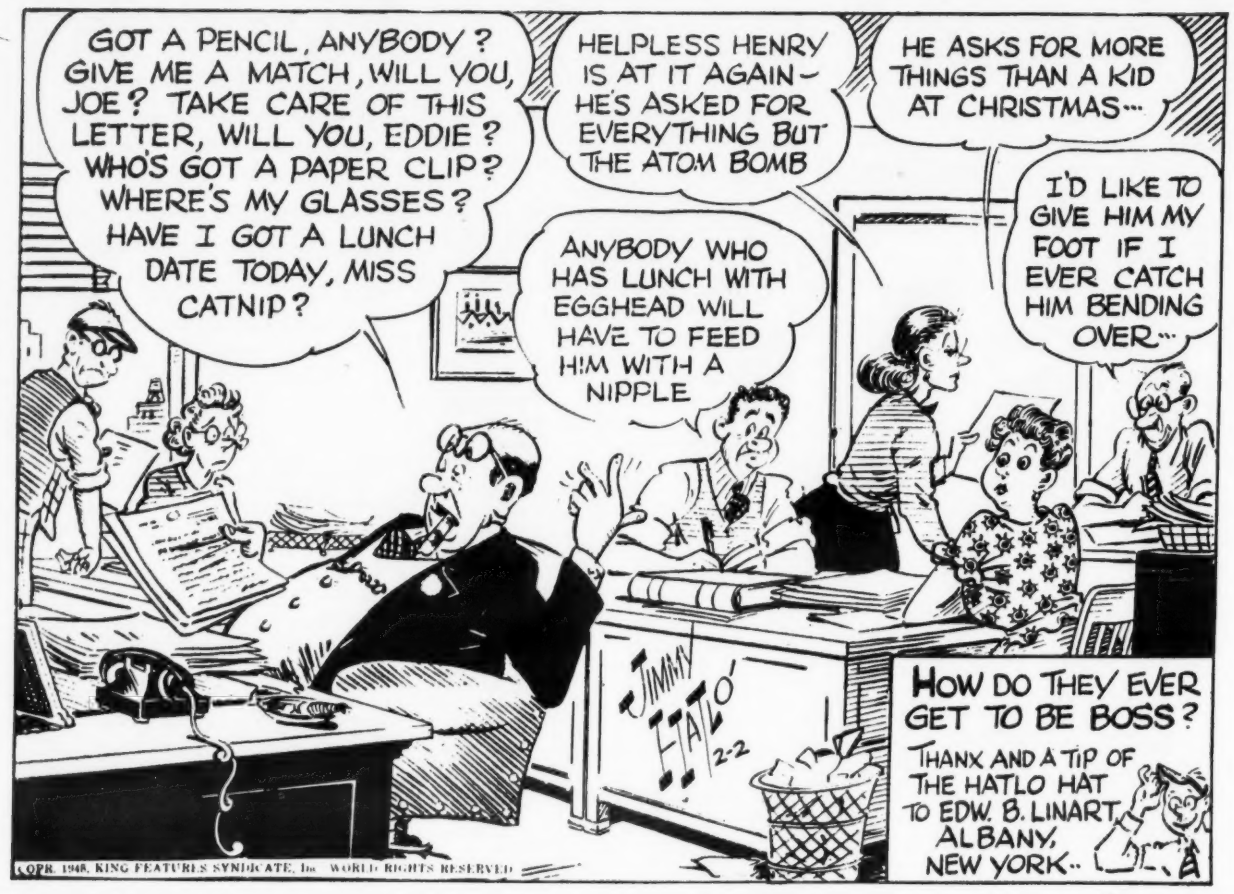
ALCO

Designers and Manufacturers of Thermostatic Expansion Valves; Evaporator Pressure Regulators; Solenoid Valves; Float Valves; Float Switches.

ALCO VALVE CO.
853 KINGSLAND AVE. • ST. LOUIS 5, MO.

Specialists IN AIR CONDITIONING FOR SMALL BUSINESS
TYPHOON
SELF-CONTAINED UNITS
Sizes up to 7-Ton
Nationally advertised to your prospects
TYPHOON AIR CONDITIONING CO., INC.
Division of Ice Air Conditioning Co., Inc.
794 UNION STREET • BROOKLYN, N. Y.

They'll Do It Every Time . . . . By Jimmy Hatlo


GOT A PENCIL, ANYBODY? GIVE ME A MATCH, WILL YOU, JOE? TAKE CARE OF THIS LETTER, WILL YOU, EDDIE? WHO'S GOT A PAPER CLIP? WHERE'S MY GLASSES? HAVE I GOT A LUNCH DATE TODAY, MISS CATNIP?
HELPLESS HENRY IS AT IT AGAIN— HE'S ASKED FOR EVERYTHING BUT THE ATOM BOMB
HE ASKS FOR MORE THINGS THAN A KID AT CHRISTMAS...
I'D LIKE TO GIVE HIM MY FOOT IF I EVER CATCH HIM BENDING OVER...
ANYBODY WHO HAS LUNCH WITH EGGHEAD WILL HAVE TO FEED HIM WITH A NIPPLE
JIMMY HATLO 2-2
HOW DO THEY EVER GET TO BE BOSS?
THANX AND A TIP OF THE HATLO HAT TO EDW. B. LINART, ALBANY, NEW YORK..
COPR. 1948, KING FEATURES SYNDICATE, Inc. WORLD RIGHTS RESERVED.

Do You Have 'One Foot In the Door'?

Coming Your Way!

A Brand New Profit Opportunity with famous PURO water coolers

After 50 years of direct sales policies, the nationwide demand for PURO Water Coolers obliges us to let *dealers and service organizations* share in PURO'S success.

We invite applications from dealers who want to profit through selling and servicing famed PURO Coolers. PURO is a truly GREAT name in water coolers. Built primarily for rental with trouble-free operation, we just had to make a quality product. That's why PURO tops competition on every comparison. PURO offers sturdier construction, better insulation, greater capacity, greater ease of servicing.

Sell or Rent, as you prefer. But if you want repeat profits year after year, rental is the better deal for the dealer.

If you qualify, we can deliver *all* models of our great 1948 line. We are in full production.

Where dealer business warrants, we will help with advertising and sales aids.

Write for full details—today, describing your business and giving references.

PURO FILTER CORPORATION OF AMERICA
436-440 Lafayette Street, New York 3, N. Y.
Cable address —"Centadrink, New York"

AN INTERNATIONAL INSTITUTION • SUBSCRIBERS ALL OVER THE WORLD

Trade Mark registered U. S. Patent Office: Est. 1926

AIR CONDITIONING AND REFRIGERATION News

Copyright 1948, Business News Publishing Co.

F. M. COCKRELL, *Founder*

Published Every Monday by BUSINESS NEWS PUBLISHING CO.
450 W. Fort St., Detroit 26, Mich. Telephone Randolph 0924.

Subscription Rates: U. S. and Possessions, Canada, and all countries in the Pan-American Postal Union: $5.00 per year; 2 years $8.00. All other foreign countries: $7.00 per year. Single copy price, 20 cents. Ten or more copies, 15 cents each; 50 or more copies, 10 cents each. Please send remittance with order.

GEORGE F. TAUBENECK
Editor and Publisher

PHIL B. REDEKER, *Editorial Director*

C. DALE MERICLE, *Associate Editor*
JOHN SWEET, *Assistant Editor*
ROY DENIAL, *Assistant Editor*
HUGH MAHAR, *Assistant Editor*
GEORGE HANNING, *Assistant Editor*
Editorial Assistants: FRANCES WEED, MARCELLA JOHNSON, MARGARET DEAN, MARGARET POMMERENING, LORRAINE MAJOR, AND MARKESE BURKS.

E. L. HENDERSON, *Business Manager*
ELIZABETH SMITH, *Assistant Bus. Mgr.*
ROBERT M. PRICE, *Adv. Representative*
ALLEN SCHILDHAMMER, *Adv. Rep.*
ALLEN S. RUSSELL, *Adv. Rep.*
BETTY JANE KING, *Adv. Secy.*
YVAUGHN CRYSLER, *Subscription Mgr.*
WALTER J. SCHULER, *Production Mgr.*

Member, Audit Bureau of Circulations. Member, Associated Business Papers.

VOLUME 53. NO. 15, SERIAL NO. 995, APRIL 12, 1948

Strikes Are Like Storms And Wars; Nobody Wins-- Everyone Loses

MORALS, customs, and styles are relative. They differ from time to time, and from place to place. What's terrible in one country seems wonderful in another. Things prohibited in Queen Victoria's era are encouraged today.

Usually, moral standards begin as rationalizations of actual facts and conditions. (In a nation whose male population has been decimated by war or disaster, for example, polygamy and bastardy may be encouraged in order to keep up the birth-rate and thus insure the survival of the race.)

Trouble is, moral standards often outlive their original *raison d'etre.*

Take strikes. Collective refusal to work in a particular factory may have been justified during the sweatshop days. But is it now, when organized Labor is the most powerful pressure group in the land? Probably not. Maybe it's time for all of us voters to reappraise the validity of the "right to strike."

Many citizens are appalled by the price we must *all* pay for strikes. So integrated and interdependent has our industrial system become that a strike of 500 laborers in one key plant may throw thousands upon thousands of other wage-earners out of work, and deprive millions of uninvolved consumers of things necessary to their very existence. A prolonged transportation strike could even *starve to death* the inhabitants of a large city.

Strikes, then, can become intolerable *today* in the *United States* (see what we mean by the statement that "morals are relative?").

Even violently pro-union apologizers will admit that nurses, firemen, policemen, and farmers should not strike. No mass refusal to work should ever permit the murder or starvation of anybody. Nevertheless, the union-lovers still condone *robbery*-through-strikes. (And robbery is is a crime, too.) If a strike in a small carburetor plant shuts down the Ford Motor Co., the latter's employes are robbed of pay they need. Ford dealers lose money and—if the strike is prolonged—go bankrupt. Likewise, Ford suppliers. By striking, a union can steal property from employers, employes, investors, and totally innocent bystanders.

Is this right?

Many strikes are instigated with the purpose of jacking up wage rates far above their market value. When such strikes succeed, higher prices result, and the general public pays through the nose. A corollary disaster may be the inefficient utilization of manpower. Such robbery—if condoned over a period of time—can only result in lower living standards, the increase of poverty, and perhaps a disintegration of our entire economic system to a degree such as France suffered at the inception of World War II.

Strikers are barbarians, outlaws, and savages—when they insist on harming millions of fellow citizens to gain minor, selfish points. They are carrying human selfishness to alarming extravagance. Their misuse of the power their monopolistic position gives them—along with their subsidization of outlaw private armies (militant pickets)—defies reason, intelligence, and fairness. It substitutes coercion, violence, lawlessness, and intimidation for fair play, cooperation and democratic processes-of-law.

What's more, national strikes in basic industries (such as coal, steel, the railroads, etc.) damage the entire nation. Strikes, or threats of strikes, may force managers of these basic industries to grant wage payments which are unwarranted. This they can do because their products and services are so fundamentally necessary that their customers must pay the ensuing higher prices in order to stay in business. Eventually everybody pays, and most of the nation is hurt when power-mad union bosses force wage-rates up unjustifiably. The cost of basic-industry strikes is paid by the entire public.

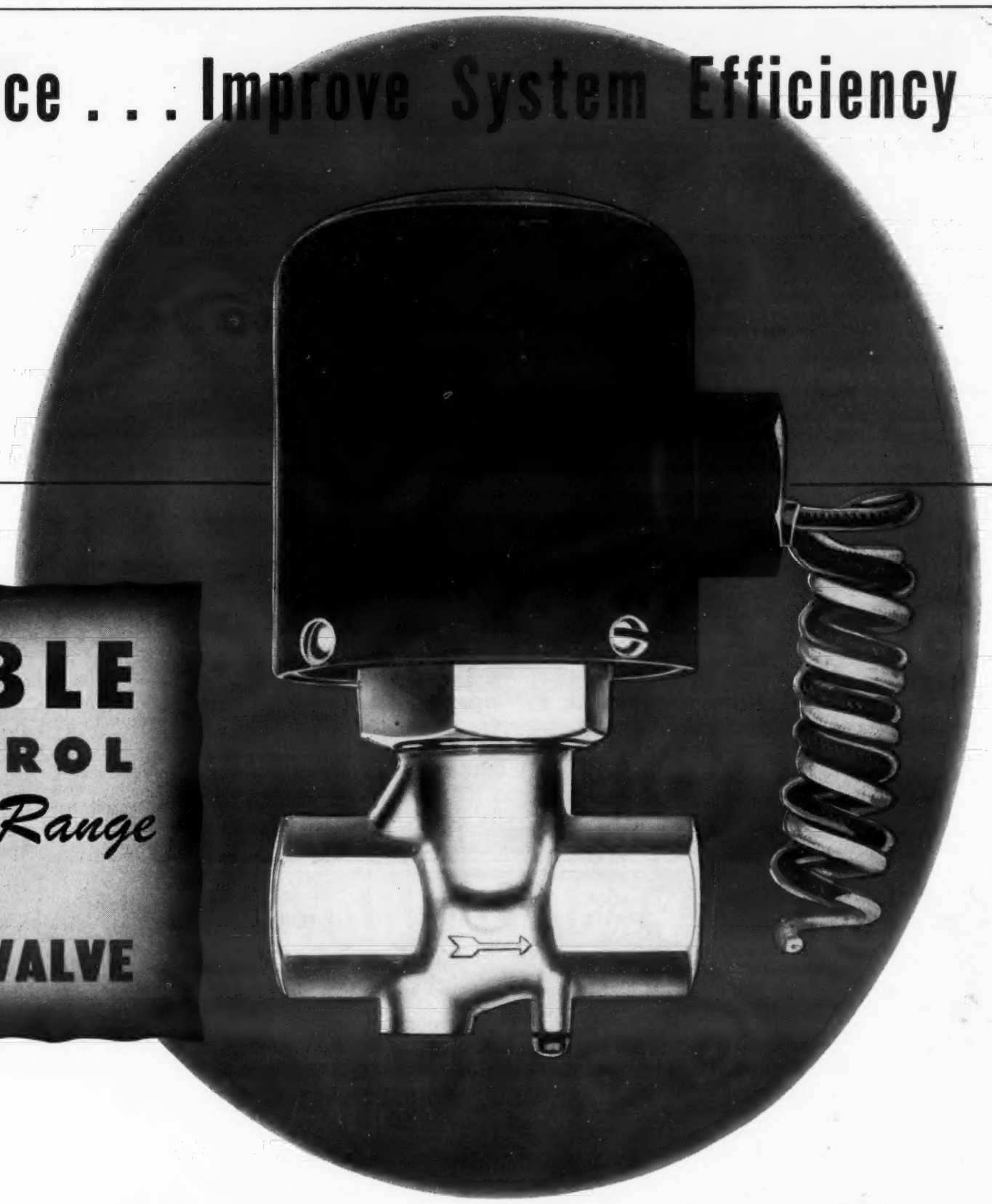
The very thought of compulsory arbitration is loathed by union officials and business executives alike.

But we may have to come to it.

Simplify Your Service . . . Improve System Efficiency

WITH

DEPENDABLE REFRIGERATION VALVES



DEPENDABLE WATER CONTROL

In a Wide Capacity Range

MODEL 71-J SOLENOID WATER VALVE

• Here's a *small* solenoid with an unusually *large* capacity range — from 16 g.p.h. to 340 g.p.h. at pressure drops from 1 to 25 p.s.i. across the valve. And with DUAL VOLTAGE COILS, it can be used at 110 or 230 volts, 50 or 60 cycles — for dependable water control on water cooled condensers, air conditioning, humidifying systems, and many industrial applications.

Popularly regarded by engineers as "today's outstanding water valve", Model 71-J is providing trouble-free service on thousands of installations. Its unique floating impact-type plunger permits instant opening even under high pressure, and without need for a kick-off spring. "Over-powered", tested at 85% of its rated voltage, Model 71-J will fully open even during reduced voltage and heavy current load. It is quiet in operation and free from vibration and mechanical rattle. Handy mounting bracket permits securing in any of several positions, while coil cover and leads can be rotated to any of four positions for versatility and simplicity in installations. Two sizes — 1/4" orifice, 340 g.p.h., and 1/8" orifice, 105 g.p.h. at 25 lbs. pressure differential.

FOR CAPACITIES TO 2979 G.P.H.

MODEL 66 Solenoid Water Valve

In spite of its large capacity and heavy construction, Model 66 requires surprisingly little power to operate. Current is needed only to open a small by-pass, allowing water to force the diaphragm down for full opening of the main valve seat . . . without additional electrical power. The A-P "Impact type" plunger also aids in easy and positive opening under high pressure.

With ⅞" orifice, Model 66 provides up to 2929 g.p.h. at 50 p.s.i. pressure differential. Your Wholesaler stocks these Dependable A-P Water Solenoids — or write for bulletins, and new condensed catalog.

AUTOMATIC PRODUCTS COMPANY

2450 North Thirty-Second Street, Milwaukee 10, Wisconsin
Export Department, 13 East 40th Street, New York 16, N. Y.

R400

DEPENDABLE *Refrigeration Valves*

STOCKED AND SOLD BY GOOD REFRIGERATION WHOLESALERS EVERYWHERE . . . RECOMMENDED AND INSTALLED BY LEADING REFRIGERATION SERVICE ENGINEERS

The Low-Temp Patrolmen!

TRACE spots leaks . . . present or future. Its vivid stay-red color indicates them plainly. Add it to any refrigeration system and be ready for the red signal.

THAWZONE, in new, reconditioned or old systems, has a two-fold purpose: (1) To destroy moisture already present. (2) To safeguard against future trouble in systems now operating satisfactorily.

BOTH ARE ESSENTIAL TO REFRIGERATION MAINTENANCE

HIGHSIDE CHEMICALS COMPANY
195 VERONA AVE., NEWARK 4, N. J.

"ONE STOP SERVICE"
For Your
REFRIGERATION SUPPLIES and PARTS
also Complete Stocks of Pipe, Valves & Fittings

HAJOCA CORPORATION
Philadelphia, Pa.
Reading, Pa. Chattanooga, Tenn.

1,500 Mile Flight by Service Engineer Saves Ship's Cargo of Fish

MIAMI, Fla.—Perhaps one of the most unusual service calls ever to be handled by the commercial refrigeration division of Hill-York Corp. was a 1,500 mile jaunt to British Honduras, made by Lyle Copenhaver, installation supervisor for the Miami firm.

The reason for the emergency airplane flight was a critical refrigeration situation which had developed in the hold of the fishing boat *Lucy* whose home port was Miami. After a successful fishing expedition for red snapper, the *Lucy* had pulled into port at Belize, British Honduras, more than 1,500 miles east of Florida, to pick up fresh food and water before starting on the homeward voyage.

While in port, with a cargo of 50 tons of red snapper, something went wrong with the refrigeration system, and a steadily rising temperature in the hold, indicated that the entire catch of fish would be lost unless "something was done about it quickly."

An urgent cable was sent to Hill-York from the British port, and the Miami refrigeration firm met the situation by chartering an airplane which delivered Copenhaver at Belize five hours later—in time to save the *Lucy's* cargo by analyzing the cause of the trouble, and making emergency repairs. The chartered plane carried sufficient parts to make anything but major repairs to any part of the ship's refrigeration system.

Service Early--Avoid the Seasonal Rush

CAN YOU GET ALONG WITHOUT REFRIGERATION FOR THE NEXT TWO WEEKS?

● *"We couldn't possibly!" you exclaim. "That cooling equipment is an indispensable part of our plant. Without it, we'd be sunk. We'd have to shut down;"*

But, **right at this very moment,** there are refrigerating machines —seemingly in perfect condition—yet on the verge of a breakdown. And when it comes, out will go a frantic call for service. Perhaps right then the heavy summer rush and shortage of service men will require you to wait . . . maybe a week . . . or two weeks . . . or **longer.** CAN YOUR PLANT OPERATE WITHOUT REFRIGERATION FOR TWO WEEKS? What happens to production? to storage? Who takes the blame for the costly breakdown? Who pays?

Why run such a risk **for even one hour,** when it's so easy to avoid? All you have to do is phone the

Industrial Refrigeration Co.
2069 TYLER AVE. PHONE 4-4444
EMERGENCY PHONE 3-1772

Appearing in the "Fresno Bee" the above newspaper advertisement is an outstanding example of what the Industrial Refrigeration Co., a refrigeration service firm, has done to help spread its normally heavy summer work load over several months. In this way the seasonal rush and resulting dissatisfied customers are held to a minimum.

Propose Law Requiring Refrigeration for Cream, Custard Pies In Lincoln

LINCOLN, Neb.—The city-county health department has recommended changing the city sanitation ordinance to require refrigeration of all custard and cream pies in restaurants and other food handling establishments.

The city council is holding the measure for further study as a result of complaints from the restaurant men that enactment of the ordinance would require additional refrigeration installations.

The proposed ordinance would require custard and cream pies to be refrigerated at 50° F. or below. At a recent hearing by the city council, L. A. Sanger of the health department explained that food poisoning in some cities had been traced to cream filled pies left open to room temperatures. Germ incubation in two or three hours was reported in some cases, he added.

Dr. Fred Long, director of the health department, said he had recommended the ordinance with a view to preventing any outbreak of food poisoning such as occurred last summer in Omaha.

Paul White, attorney for the Lincoln Restaurant Association, declared that his clients lacked sufficient refrigerator space to store their cream pies; that there is a tendency of such pies to become rubbery and unpalatable when refrigerated; and that pie delivery from out-city bakeries without refrigerator facilities would be eliminated.

If the ordinance is passed and enforced, he asserted, custard and cream pies will necessarily disappear from Lincoln food shelves.

A Lincoln bakery proprietor, meanwhile, has stated that his bakery refrigerates such pies and that they do not become rubbery or soggy under refrigeration.

An expert at the University of Nebraska, College of Agricluture, food and nutrition department, said that if the pies were of good quality they would not became rubbery under refrigeration. Many new cream-basis recipes call for refrigeration, it was pointed out. The expert added:

"From a health standpoint, I would be in favor of the refrigeration plan. Milk contains all the food elements that will bring about bacteria growth.

Charles Q. Sherman Moves To Larger N.Y. Quarters

NEW YORK CITY — Charles Q. Sherman, eastern divisional manager for two midwestern refrigeration firms, has moved his operations to larger quarters at 19 W. 44th St. here.

Sherman said that he will devote 1,250 sq. ft. of floor space to the display of reach-in refrigerators, bottle coolers, frozen food equipment, and ice cube makers manufactured by the United Refrigerator Co. of St. Paul, Minn., and soda fountains and luncheonette equipment manufactured by the Stanley Knight Corp. of Chicago.

Davies Retained To Design USAirco Line

MINNEAPOLIS — Charles Davies, New York industrial designer, has been retained by the United States Air Conditioning Corp. here to develop and style a complete line of room coolers, store coolers, unit heaters, and air conditioning equipment.

BETTER SERVICE *Now* ON PERFECTION REFRIGERATION PARTS

Valve Plates
Connecting Rods
Pistons
Piston Pins
Eccentrics
Eccentric Shafts
Seals
Valve Reeds
and Discs

now manufactured exclusively by

DELAVAN MANUFACTURING CO.
3009 SIXTH AVENUE
DES MOINES 13, IOWA

Bowen REFRIGERATION SUPPLIES, INC.
Atlanta Jacksonville
Tampa Miami Charlotte
"The South's Largest Refrigeration Supply Jobber"

insist on genuine **Marlo** products
MARLO = HEAT TRANSFER Since 1925

FOR PEAK PERFORMANCE *on all Installations* **use SPORLAN** *throughout!*

SPORLAN CATCH-ALLS 1/3 Ton, 1/2 Ton 1 Ton
SPORLAN STRAINERS
TYPE 4000
SPORLAN SOLENOID VALVES Type 62
SPORLAN SOLENOID PILOT CONTROL

There is only one style and size..will out-perform any regular solenoid valve over 10 tons capacity . . . costs less..cheaper to install

With a complete line of Catch-Alls... Solenoid Valves...Thermostatic Expansion Valves ...Refrigerant Distributors and Strainers to choose from, you can order Sporlan products throughout for any commercial refrigeration or air conditioning installations you have in '48, direct from your wholesaler. He also carries the famous Sporlan Solenoid Pilot Control, which will save you money 3 ways on any job requiring solenoid valves larger than 10 tons. See him at once and learn what peak performance really means when you use Sporlan throughout.

Remember, too...
that only SPORLAN offers you Thermostatic Expansion Valves with Selective Charges

Type "G" SPORLAN THERMOSTATIC EXPANSION VALVES with Selective Charges
SPORLAN "C" CHARGE for suction temperatures ABOVE zero
SPORLAN "Z" CHARGE for suction temperatures BELOW zero

The complete line of SPORLAN PRODUCTS
SOLENOID VALVES - - - SOLENOID PILOT CONTROLS
MODULATING PILOT CONTROLS - REFRIGERANT DISTRIBUTORS
STRAINERS CATCH-ALLS THERMOSTATIC EXPANSION VALVES

SPORLAN VALVE COMPANY
7525 SUSSEX AVENUE • ST. LOUIS 17, MISSOURI

'Mass Promotion' In Comfort Cooling

Electric Institute Blankets Air Cooling Prospects with Big Direct-Mail Campaign

WASHINGTON, D. C.—Five mailing pieces sent to 8,500 commercial customers of the local power company by the electric Institute of Washington to stimulate interest in commercial air conditioning equipment are "paving the way" for members' salesmen, according to William G. Hills, managing director of the Institute.

"While the number of cards returned, requesting a representative to call on a prospect, is not heavy, we have found that the program is starting people to thinking about planning air conditioning now and not waiting until hot weather is upon them," Hills reported.

First of the mailing pieces, which were sent out at 10-day intervals starting Feb. 16, consisted of a four-page, 8½ by 11 in. folder, a letter, and the business reply card referred to above.

On the cover of the folder was this information and advice: "Planning is free—equipment is ready. Get on the bandwagon with planned air conditioning."

Inside pages urged the reader to "do your thinking and planning now . . . attract more hot-weather customers, get more hot-weather sales, up employe efficiency, wipe out merchandise spoilage and soilage, enjoy year-around comfort."

The reader was then told "why you want planned air conditioning and no other kind," "what planned air conditioning gives you," "why the Electric Institute members offer you this free planning service," and "why you should start planning and acting now."

This information was followed by brief statements from six Washington businessmen, testifying that air conditioning is a business builder for them. Photographs of the businessmen appeared above each testimonial.

The back page listed the names of distributors cooperating in the program. They were The United Clay Products Co. (Carrier), Wm. Bornstein & Son, Inc. (Chrysler Airtemp), Goddard-Hottel Corp. (Frick), Frigidaire Sales Corp., General Electric Supply Corp., The Jack Stone Co. (G-E and Gemco), Combustioneer Corp. (Westinghouse), Griffith Consumers Co. (Worthington), and Washington Refrigeration Co. (York).

The letter accompanying the folder pointed out that "come summer . . . everybody (including you) will be spending money with the restaurants, tailor shops, grocers, drug stores—with all types of business which furnish cool air conditioned comfort!"

"You know this," the letter continued, "and that's why you know that air conditioning your business can mean more profits for you. Air conditioning equipment is back on the market, better than ever and less expensive than you think! Now is the time to make your plans, get an estimate and get started. . . ."

Prospects were told that by mailing the attached card, the services of a qualified air conditioning representative would be available to provide free estimates for their jobs and that his recommendations "will be a guide toward the selection of proper equipment tailored to your specific needs."

Mailing piece number two was another letter. It called attention to the first mailing piece and stressed that when the reader mails the business reply card, "you've taken the biggest step you've ever taken toward more steady hot-weather business."

Another folder, letter, and card comprised the third mailing piece. The folder, entitled "Cash in With Air Conditioning," and the letter restated and reemphasized the advantages of planned air conditioning and of "planning now."

This piece was followed by still another letter headed "You'll Be All Set For Hot Weather If You Act Now."

The promotion was wound up with a business reply card on which the prospect could indicate he was ready to discuss air conditioning plans with an accredited representative.

New Passenger Liner Has Great Variety of Cooling Applications

SAN FRANCISCO—Some unusual refrigeration and air conditioning applications are among the innovations on the President Cleveland, largest American passenger liner built since the war, which not long ago sailed on its maiden voyage to the Orient.

The new liner is of 23,000 tons displacement and carries 550 passengers. She was launched at the Bethlehem-Alameda shipyards in California, in June, 1946. Six hundred and ten feet long, the vessel is driven at 21 knots by turbo-electric motors generating 20,000 hp.

The President Cleveland has two swimming pools, an air conditioning system for public spaces and state rooms, first-class state rooms with individual baths, newest type life boats (two of which are equipped with motors and radio), and such instruments as Gyro-compasses, echo depth sounder, radio direction finder, public address system, fire detection and control system.

Specially insulated compartments carry 600 tons of perishables at -5° F. Most of the remaining 3,900 tons of cargo is under humidity control.

A complete hospital unit, children's playroom, movies, gymnasium and beauty parlor, all help to insure the passengers a healthful voyage.

Mess rooms, along with lounges for personnel, are air conditioned.

There are 13 refrigerated cargo compartments on the vessel. Three of these are in the hold, while the others are on C and D decks. The spaces vary in size from 2,450 to 6,000 cu. ft. each. The total refrigerated volume is nearly 55,000 cu. ft.

Eggs, meat, and vegetables in the frozen state are stored at -10° F., but part of the frozen meat is held at 0° F. Some fresh vegetables and fruit are stored at 35°, with a change of air once per hour; others are held at 55°, and have three changes per hour. The temperatures are controlled by modulated thermostatic regulating valves, the brine being carried at two temperature levels.

Hot brine, heated by steam, is piped to the room coolers for defrosting; a signal system permits the operator to notify the machinery room when cold brine is again wanted. The unit air coolers are of the vertical marine type, with galvanized finned coils.

Cold brine is furnished from three shell-and-tube coolers, each 20 in. in. diameter and 9 ft. long, and having 378 red brass tubes of ⅝ in. size. Inserted in the "Freon" suction lines are three gas-and-liquid heat exchangers, of approxiimately half the size of the coolers.

Each of the three compressors is a Frick 13¼ by 9 two-cylinder machine, driven by a motor of 100 hp. These motors handle direct current, and are direct-connected to the machines through flexible couplings; the speeds can be varied between 200 and 400 r.p.m. The compressors have automatic capacity controls.

The receivers are 12 in. in diameter and 10 ft. long. Everything is arranged in triplicate. There are three high-pressure cutouts, three condensing water regulating valves, three sets of low-pressure switches, high- and low-pressure gauges, condensing water gauges, "Freon-12" strainers and dehydrators, liquid solenoid valves, thermal expansion valves, and plain thermostats.

There are a total of 23 thermometers for the refrigerant lines, brine lines and air ducts, plus 13 indicating room thermometers. Also an electric-resistance indicating thermometer arranged for reading at 24 points.

For food service, the ship uses six Frick low pressure refrigerating units. These machines cool 10 storage boxes, and in addition are connected to an ice making system and a galley refrigerator.

see your "DETROIT" WHOLESALER for Expansion Valves Solenoid Valves Controls

"DETROIT"

2810

DETROIT LUBRICATOR COMPANY General Offices: 5900 TRUMBULL AVENUE DETROIT 8, MICHIGAN

Division of AMERICAN RADIATOR & Standard Sanitary CORPORATION

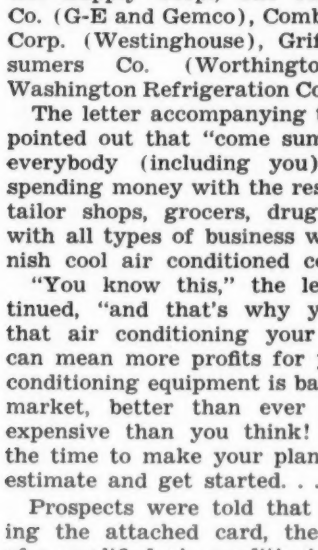
Canadian Representatives — RAILWAY AND ENGINEERING SPECIALTIES LIMITED, MONTREAL, TORONTO, WINNIPEG

"Detroit" Heating and Refrigeration Controls • Engine Safety Controls • Float Valves and Oil Burner Accessories

"Detroit" Expansion Valves and Refrigeration Accessories • Stationary and Locomotive Lubricators

"DETROIT"

EXPORT DEPARTMENT—Box 218, Ridgefield, New Jersey



FOR DEPENDABILITY

on your next job choose a

MILLS

a condensing unit for every installation

Mills Industries, Incorporated • 4100 Fullerton Avenue • Chicago 39, Illinois

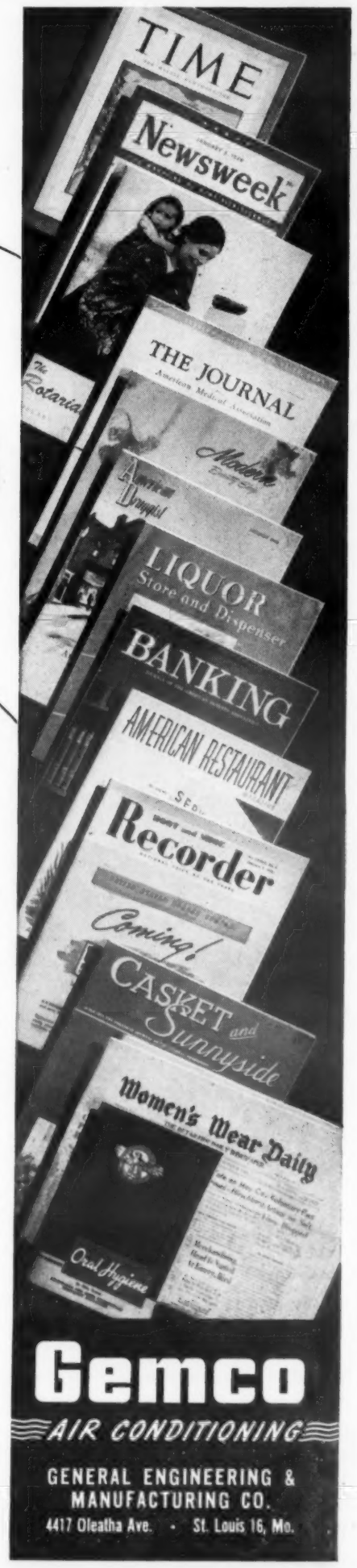
In these leading business magazines

7½ MILLION OF THE BEST "PROSPECTS" FOR AIR CONDITIONING in America are Reading why GEMCO'S THE BUY

If you're selling Gemco "packaged" Air Conditioners, you've felt the effect of national advertising directed to the *people who sign the orders.* It's a direct story of the unique, years-ahead Gemco features that make air conditioning practical to *buy now* . . . Your best prospects are getting this message, in the magazines shown at right. A few desirable territories are still open.

Remember, too—Gemco Dealers automatically become dealers for MIRACULA, the Heat Pump that caused a sensation at the recent Air Conditioning Exposition in Cleveland and the Heating and Ventilating Exposition in New York. Dealers are now making pilot installations, so as to be ready for the volume market in 1949.

Wire or write for complete information on the Gemco franchise *now.*



Gemco

AIR CONDITIONING

GENERAL ENGINEERING & MANUFACTURING CO.

4417 Oleatha Ave. • St. Louis 16, Mo.

insist on genuine

Marlo

products

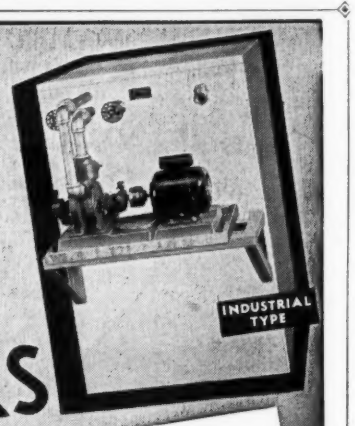
MARLO = HEAT TRANSFER
Since 1925

Bids Open on Cooling For Texas VA Hospital

WASHINGTON, D. C.—Construction bids, including purchase and installation of a refrigerating system, on a 200 bed general medical and surgical hospital for veterans to be built at Marlin, Texas are now being accepted by Veterans Administration.

Drawings and specifications may be obtained from the VA's construction service here. Bids will be opened on May 25.

Filtrine
HIGH EFFICIENCY
WATER COOLERS



GALLON FOR GALLON...YOUR BEST BUY!
For Cafeteria use . . . stainless steel cabinet models in all sizes. For Industrial use . . . variety of models for temperatures down to 34°
Several choice areas available for manufacturers' representatives.
FILTRINE MANUFACTURING CO.
53 Lexington Ave. Brooklyn 5, N. Y.
Manufacturers of Coolers & Filters for over 40 Years

69 Industry Producers Submitted Sales Data For Fourth Quarter

WASHINGTON, D. C.—The tabulated figures on fourth-quarter sales of air conditioning and commercial refrigeration equipment and components, as compiled and released by the U. S. Bureau of the Census, is based on reports submitted by 69 manufacturers—two less than in the third quarter.

Estimates were made for a few companies, representing—according to the Bureau of the Census—a small portion of the industry that failed to get its reports in on time.

Shipment statistics included in the report apply to equipment actually billed and shipped. These figures are equivalent to completed sales. Complete units delivered on consignment or shipped to a branch warehouse for stocks are not included until such time as they are actually sold. Dollar values shown are the manufacturers' net billing prices, f.o.b. factory.

The tables in the Bureau of Census report present information on manufacturers' shipments of air conditioning equipment, and components and accessories for air conditioning and commercial refrigeration equipment.

First part of Table 1 presents summary data on domestic and export shipments for the third quarter of 1947, revised since its previous publication. The second part of Table 1 presents similar data for the fourth quarter of 1947.

Table 2 presents detailed information by type of equipment for the fourth quarter.

Air Conditioning, Commercial Refrigeration Shipments For Fourth Quarter of 1947

Table 1—Air Conditioning Equipment and Components and Accessories for Air Conditioning and Commercial Refrigeration Equipment: Summary of Shipments by Major Class of Product, Third and Fourth Quarters 1947

Third Quarter 1947*
Shipments of Complete Units

Product	Total No.	Total Value (dollars)	Domestic† No.	Domestic† Value (dollars)	Export‡ No.	Export‡ Value (dollars)
Section I—Components and Accessories						
Total	....	**43,858,195**	....	**39,574,597**	....	**4,283,588**
Condensing units	293,238	20,994,951	275,229	19,033,272	18,009	1,961,679
Ammonia refrigerants	419	560,316	370	510,477	49	49,839
Refrigerants except ammonia	292,819	20,434,635	274,859	18,522,795	17,960	1,911,840
Air cooled	283,972	16,808,899	266,572	15,210,838	17,400	1,598,061
Open type	117,940	10,456,526	102,391	8,944,141	15,549	1,512,385
Hermetic type	166,032	6,352,373	164,181	6,266,697	1,851	85,676
Water cooled	8,847	3,625,736	8,287	3,311,957	560	313,779
Compressors, compressor units	159,431	8,929,380	151,004	7,952,863	8,427	976,517
Ammonia refrigerants	973	2,267,009	765	1,809,908	208	457,101
Refrigerants except ammonia	158,458	6,662,371	150,239	6,142,955	8,219	519,416
Centrifugal refrigeration machines	84	2,086,789	63	1,631,291	21	455,498
Heat exchanger equipment	....	11,847,075	....	10,957,171	....	889,904
Evaporative condensers	1,562	1,930,618	1,413	1,774,565	149	156,053
Unit coolers	32,165	4,673,913	28,802	4,233,594	3,363	440,319
Air conditioning	4,032	1,492,847	3,476	1,354,631	556	138,216
Refrigeration	28,133	3,181,066	25,326	2,878,963	2,807	302,103
Other heat exchanger equipment§	....	5,242,544	....	4,949,012	....	293,532
Section II—Self-Contained Air Conditioning Units and Ice Making Machines						
Self-contained air conditioning units	15,854	9,094,060	14,670	8,454,121	1,184	639,939
Room type	7,927	1,818,474	7,021	1,483,112	906	335,362
Other than room type	7,927	7,275,586	7,649	6,971,009	278	304,577
Ice making machines	1,866	627,761	1,722	489,899	144	137,862

*Revised.

Fourth Quarter 1947
Shipments of Complete Units

Product	Total No.	Total Value (dollars)	Domestic† No.	Domestic† Value (dollars)	Export‡ No.	Export‡ Value (dollars)
Section I—Components and Accessories						
Total	....	**43,245,295**	....	**38,535,401**	....	**4,709,894**
Condensing units	279,063	20,648,840	261,420	18,080,701	17,643	2,568,139
Ammonia refrigerants	457	624,011	363	512,233	94	111,778
Refrigerants except ammonia	278,606	20,024,829	261,057	17,568,468	17,549	2,456,361
Air cooled	267,687	16,441,080	251,252	14,552,598	16,435	1,888,482
Open type	82,000	8,386,209	65,761	6,516,195	16,239	1,870,014
Hermetic type	185,687	8,054,871	185,491	8,036,403	196	18,468
Water cooled	10,919	3,583,749	9,805	3,015,870	1,114	567,879
Compressors, compressor units	173,896	9,416,922	160,648	8,262,359	13,248	1,154,563
Ammonia refrigerants	1,377	2,734,402	1,082	2,062,310	295	672,092
Refrigerants except ammonia	172,519	6,682,520	159,566	6,200,049	12,953	482,471
Centrifugal refrigeration machines	89	2,210,011	81	2,089,177	8	120,834
Heat exchanger equipment	....	10,969,522	....	10,103,164	....	866,358
Evaporative condensers	1,267	1,546,826	1,131	1,392,198	136	154,628
Unit coolers	26,858	4,089,237	24,033	3,660,289	2,825	428,948
Air conditioning	2,977	1,124,767	2,853	1,024,759	124	100,008
Refrigeration	23,881	2,964,470	21,180	2,635,530	2,701	328,940
Other heat exchanger equipment§	....	5,333,459	....	5,050,677	....	282,782
Section II—Self-Contained Air Conditioning Units and Ice Making Machines						
Self-contained air conditioning units	9,891	6,105,502	8,022	4,998,150	1,869	1,107,352
Room type	4,626	1,297,043	3,456	821,134	1,170	475,909
Other than room type	5,265	4,808,459	4,566	4,177,016	699	631,443
Ice making machines	2,504	564,466	2,274	428,873	230	135,593

†Continental United States. ‡Includes Canada, Mexico, and United States territories. §Includes condensers and liquid coolers, shell and tube and shell and coil types, as well as fin coils (heating and cooling), and plate type evaporators.

Table 2—Air Conditioning Equipment and Components and Accessories for Air Conditioning and Commercial Refrigeration Equipment: Shipments by Type of Product, Fourth Quarter 1947

Product	Shipments of Complete Units: Total No.	Total Value (dollars)	Domestic* No.	Domestic* Value (dollars)	Export† No.	Export† Value (dollars)	No. of Comps. Made by Reporting Firms and Used In Units Reported as Shipped	No. of Plants Reporting
Section I—Components and Accessories								
Total	....	**43,245,295**	....	**38,535,401**	....	**4,709,894**	....	72
Condensing units, total	**279,063**	**20,648,840**	**261,420**	**18,080,701**	**17,643**	**2,568,139**	....	36
Refrigerants except ammonia, total‡	278,606	20,024,829	261,057	17,568,468	17,549	2,456,361	....	32
Air cooled, total	267,687	16,441,080	251,252	14,552,598	16,435	1,888,482	....	28
Open type, total	82,000	8,386,209	65,761	6,516,195	16,239	1,870,014	....	26
⅛ hp. and under.	6,101	238,087	4,819	154,704	1,282	83,393	....	7
¼ hp.	16,551	1,074,846	12,744	786,183	3,807	288,663	....	21
⅓ hp.	26,540	1,977,473	20,942	1,473,409	5,598	504,064	....	23
½ hp.	15,513	1,615,255	13,422	1,361,178	2,091	254,077	....	22
¾ hp.	7,264	1,021,901	6,105	844,325	1,159	177,576	....	20
1 hp.	4,087	877,679	3,437	756,974	650	120,705	....	20
1½ hp.	3,275	811,299	2,561	640,871	714	170,428	....	21
2 hp.	1,697	455,960	1,173	315,933	524	140,027	....	18
3 and 5 hp.	972	313,709	558	182,618	414	131,091	....	13
Hermetic type, total	185,687	8,054,871	185,491	8,036,403	196	18,468	....	11
⅛ hp. and under.	129,874	4,219,253	129,853	4,218,201	21	1,052	....	7
¼ hp.	30,334	2,214,099	30,296	2,211,636	38	2,463	....	10
⅓ hp.	22,410	1,319,008	22,350	1,314,213	60	4,795	....	8
½ hp. and over.	3,069	302,511	2,992	292,353	77	10,158	....	4
Water cooled, total	10,919	3,583,749	9,805	3,015,870	1,114	567,879	....	23
⅛ hp. and under.	146	15,252	143	15,019	3	233	....	4
½ hp.	1,907	258,195	1,702	230,905	205	27,290	....	14
¾ hp.	2,076	338,122	1,987	325,434	89	12,688	....	11
1 hp.	1,572	292,036	1,529	284,070	43	7,966	....	16
1½ hp.	1,402	340,466	1,315	320,199	87	20,267	....	17
2 hp.	885	240,638	791	217,192	94	23,446	....	15
3 hp.	1,063	387,788	910	331,544	153	56,244	....	19
5 hp.	879	456,127	697	360,279	182	95,848	....	18
7½ hp.	288	218,297	210	155,448	78	62,849	....	13
10 hp.	259	241,309	200	185,801	59	55,508	....	13
15 hp.	224	268,121	162	186,297	62	81,824	....	13
20 hp.	83	140,738	41	66,538	42	74,200	....	9
25 hp.	39	70,428	36	62,748	3	7,680	....	3
30 hp.	13	32,429	7	16,378	6	16,051	....	4
40 hp.	22	69,700	20	64,479	2	5,221	....	4
50 hp. and over.	61	214,103	55	193,539	6	20,564	....	5
Ammonia refrigerants§								
Reciprocating water cooled, total	457	624,011	363	512,233	94	111,778	....	9
7½ hp. and under	139	112,269	103	83,096	36	29,173	....	8
10 hp.	93	101,889	79	89,761	14	12,128	....	7
15 hp.	119	190,170	98	160,759	21	29,411	....	5
20 hp. and over.	106	219,683	83	178,617	23	41,066	....	5

(Concluded on next page)

Emerson-Electric engineers collaborate with yours in designing and furnishing the right kind of motor to fit your particular appliance or equipment. Such collaboration — Twin-gineering, we call it—may save you considerable engineering back-tracking, suggests money-saving short cuts in manufacturing, helps you equip your new or improved product with the operational advantages which bring greater user-satisfaction and more profitable sales. Learn how this cooperative service can assist you—without charge — write to Emerson-Electric *today!*

THE EMERSON ELECTRIC MFG. CO., St. Louis 21, Mo.
Branches: New York • Chicago • Cincinnati • Detroit • Los Angeles • Davenport

77

EMERSON ELECTRIC
MOTORS · FANS
EMERSON ELECTRIC
APPLIANCES

Table 2 (Cont.)—Air Conditioning Equipment and Components And Accessories for Air Conditioning and Commercial Refrigeration Equipment: Shipments by Type of Product, Fourth Quarter 1947

(Concluded from preceding page)

Compressors and compressor units, totals	**173,896**	**9,416,922**	**160,648**	**8,262,359**	**13,248**	**1,154,563**	**271,573**	**32**
Refrigerants except ammonia, total‡	172,519	6,682,520	159,566	6,200,049	12,953	482,471	271,351	28
¼ hp. and under	128,163	3,208,697	119,463	3,100,700	8,700	107,997	174,775	14
⅓ hp.	30,958	854,084	28,667	807,862	2,291	46,222	52,861	17
½ hp.	8,127	211,576	7,028	183,829	1,099	27,747	16,930	15
¾ hp.	1,260	54,081	944	40,456	316	13,625	8,167	15
1 hp.	376	20,295	193	9,902	183	10,393	4,419	15
1½ hp.	273	19,862	261	18,724	12	1,138	4,589	16
2 hp.	472	31,676	433	28,783	39	2,893	2,061	14
3 hp.	590	76,136	486	60,376	104	15,760	3,108	15
5 hp.	446	116,725	393	94,530	53	22,195	3,667	14
7½ hp.	418	127,260	402	121,806	16	5,454	216	11
10 hp.	275	178,334	249	160,992	26	17,342	227	15
15 hp.	293	236,728	272	218,385	21	18,343	168	14
20 hp.	188	178,140	174	157,634	14	20,506	66	12
25 hp.	225	296,161	208	270,902	17	25,259	22	9
30 hp.	89	167,199	79	148,767	10	18,432	7	5
40 hp.	111	227,944	105	216,237	6	11,707	16	8
50 hp.	153	315,992	133	271,581	20	44,411	21	7
60 hp.	53	152,197	29	84,884	24	67,313	9	8
75 hp.	30	102,278	29	99,693	1	2,585	22	5
100 hp. and over	19	107,155	18	104,006	1	3,149	....	3
Ammonia refrigerants, total§	1,377	2,734,402	1,082	2,062,310	295	672,092	222	12
7½ hp. and under	149	78,996	93	49,149	56	29,847	108	7
10 hp.	135	87,312	122	79,934	13	7,378	64	8
15 hp.	202	170,601	167	142,419	35	28,182	30	7
20 hp.	121	129,647	92	94,628	29	35,019	20	9
25 hp.	112	159,457	92	130,599	20	28,858	....	4
30 hp.	178	261,598	156	229,816	22	31,782	....	7
40 hp.	102	206,392	78	158,954	24	47,438	....	6
50 hp.	60	144,747	38	96,515	22	48,232	....	4
60 hp.	99	257,596	75	197,791	24	59,805	....	5
75 hp.	73	243,277	55	185,918	18	57,359	....	5
100 hp.	72	294,911	57	238,086	15	56,825	....	6
101 to 200 hp.	52	304,191	41	242,850	11	61,341	....	4
201 to 300 hp.	9	93,196	9	93,196	....	....	....	3
301 hp. and over	13	302,481	7	122,455	6	180,026	....	3

Table 2 (Cont.)—Shipments of Complete Units

Product	Shipments of Complete Units: Total No.	Total Value (dollars)	Domestic* No.	Domestic* Value (dollars)	Export† No.	Export† Value (dollars)	No. of Plants Reporting
Centrifugal refrigeration machines, (water and brine chilling) total¶	**89**	**2,210,011**	**81**	**2,089,177**	**8**	**120,834**	**3**
200 hp. and under	33	577,125	25	456,291	8	120,834	3
201 hp. and over	56	1,632,886	56	1,632,886	....	....	3
Heat exchanger equipment, total	....	**10,969,522**	....	**10,103,164**	....	**866,358**	**48**
Evaporative condensers total‖	1,267	1,546,826	1,131	1,392,198	136	154,628	21
5 tons and under	184	51,466	148	40,892	36	10,574	11
5.1 to 7.5 tons	80	36,116	70	30,503	10	5,613	12
7.6 to 10 tons	152	91,837	142	84,497	10	7,340	14
10.1 to 15 tons	116	84,832	106	76,043	10	8,789	16
15.1 to 20 tons	63	63,326	59	59,918	4	3,408	16
20.1 to 30 tons	226	253,238	209	231,925	17	21,313	17
30.1 to 50 tons	278	467,980	248	418,794	30	49,186	18
Over 50 tons	168	498,031	149	449,626	19	48,405	13
Unit coolers, total	26,858	4,089,237	24,033	3,660,289	2,825	428,948	33
Air conditioning remote type, total**	2,977	1,124,767	2,853	1,024,759	124	100,008	17
3 tons and under	1,498	103,362	1,491	102,055	7	1,307	6
3.1 to 5 tons	220	80,585	188	70,692	32	9,893	10
5.1 to 10 tons	323	175,723	301	156,592	22	19,131	15
10.1 to 25 tons	671	485,707	639	452,042	32	33,665	14
Over 25 tons	265	279,390	234	243,378	31	36,012	5
Refrigeration, total††	23,881	2,964,470	21,180	2,635,530	2,701	328,940	27
Ceiling and wall mounted, total	22,817	1,753,012	20,191	1,509,436	2,626	243,576	24
1,000 B.t.u./hr. and under	756	25,884	636	21,665	120	4,219	3
1,001 to 2,000 B.t.u./hr.	3,483	182,656	3,337	176,965	146	5,691	13
2,001 to 4,000 B.t.u./hr.	5,657	230,423	5,162	200,902	495	29,521	15
4,001 to 6,000 B.t.u./hr.	3,308	214,521	2,923	186,300	385	28,221	19
6,001 to 8,000 B.t.u./hr.	3,980	323,071	3,309	261,271	671	61,800	21
8,001 to 12,000 B.t.u./hr.	2,192	223,430	1,814	176,080	378	47,350	18
12,001 to 18,000 B.t.u./hr.	2,216	295,777	1,826	236,920	390	58,857	16
Over 18,000 B.t.u./hr.	1,225	257,250	1,184	249,333	41	7,917	8
Floor mounted dry type, total	752	698,599	686	624,239	66	74,360	16
5 tons and under	291	171,536	267	151,174	24	20,362	12
5.1 to 7.5 tons	225	238,602	221	232,430	4	6,172	12
7.6 to 10 tons	102	127,582	89	113,124	13	14,458	11
10.1 to 15 tons	90	102,242	69	75,189	21	27,053	6
Over 15 tons	44	58,637	40	52,322	4	6,315	4
Floor mounted spray type, total	312	512,859	303	501,855	9	11,004	8
5 tons and under	13	14,165	12	13,308	1	857	4
5.1 to 7.5 tons	137	214,997	129	204,850	8	10,147	6
7.6 to 10 tons	35	37,820	35	37,820	....	....	4
10.1 to 15 tons	56	81,263	56	81,263	....	....	4
Over 15 tons	71	164,614	71	164,614	....	....	5
Other heat exchanger equipment, total	....	5,333,459	....	5,050,677	....	282,782	34
Condensers, shell and tube and shell and coil	....	694,964	....	538,209	....	156,755	18
Shell and tube liquid coolers	....	330,694	....	274,680	....	56,014	9
Shell and coil liquid coolers	....	24,673	....	24,639	....	34	5
Fin coils—heating other than forced air units	....	1,442,141	....	1,426,548	....	15,593	11
Fin coils—cooling other than forced air units	....	1,967,423	....	1,946,055	....	21,368	17
Evaporators, plate type	....	873,564	....	840,546	....	33,018	8
Section II—Self-Contained Air Conditioning Units and Ice Making Machines							
Self-contained air conditioning units, total	9,891	6,105,502	8,022	4,998,150	1,869	1,107,352	16
Room type, total	4,626	1,297,043	3,456	821,134	1,170	475,909	7
Window sill type	°4,626	1,297,043	3,456	821,134	1,170	475,909	7
Floor type							
Other than room type, total‡‡	5,265	4,808,459	4,566	4,177,016	699	631,443	14
3 tons and under	1,603	979,192	1,339	801,933	264	177,259	12
5 tons	3,104	2,727,430	2,691	2,325,771	413	401,659	12
7.5 tons	189	249,881	180	236,780	9	13,101	6
10 tons	159	320,156	156	313,220	3	6,936	7
15 tons	110	255,741	102	233,563	8	22,178	7
20 tons	57	125,475	57	125,475	....	....	3
Over 20 tons	43	150,584	41	140,274	2	10,310	3
Ice making machines	2,504	564,466	2,274	428,873	230	135,593	7

*Continental United States. †Includes Canada, Mexico, and United States territories. ‡Rating is the maximum horsepower for which a unit is catalogued corresponding to ASRE Groups I to IV conditions. §Rating is the maximum horsepower for which a unit is catalogued corresponding to ASRE Groups V to VIII conditions. ¶Rating is the maximum horsepower for which the unit is rated. ‖Rating is the refrigeration condensing tonnage at 40° F. suction, 105° F. condensing temperature, and 78° F. wet bulb, entering air temperature, with normal air quantity through unit. **Rating is the tonnage at 40° F. refrigerant temperature and air entering at 80° F. dry bulb and 50% relative humidity, and normal air quantity through unit. ††Rating is based on normal air quantity, with refrigerant temperature at 15° F. and air entering at 35° F. dry bulb and 85% relative humidity. ‡‡Rating based on maximum compressor and fan speeds with air entering evaporator at 80° F. dry bulb and 67° F. wet bulb and condenser water entering at 75° F. and leaving at 95° F., or air entering air-cooled condenser at 95° F. dry bulb. °Combined to avoid disclosing the operations of individual companies.

Western Auto Supply To Open First Canadian Store Soon

KANSAS CITY, Mo. — Western Auto Supply Co. will formally open a retail store in Hamilton, Ontario, Canada, April 15.

The Hamilton store, the company's first in the Dominion, is expected to be the nucleus of further Western Auto expansion in Canada.

Extension of the present Western Auto network (260 company-owned stores, and 1930 independent Western Auto Associate Stores, operating in 35 states) beyond the territorial limits of the United States has been in the planning stage for several years.

Plans will be shaped more definitely by experience with the Hamilton operation. The program calls for additional Western Auto company-owned stores, and a number of independently owned and operated Western Auto Associate Stores.

The Hamilton store occupies a leased 3-story building at 131 King Street, West. In addition to the retail store and service department on the first floor, the building will house Western Auto's Canadian buying offices, headed by W. L. Anderson, who will be also the manager of the store. Both Anderson and the assistant manager, James L. Keen, are native Canadians.

O'Sullivan New Crosley Southeastern Manager

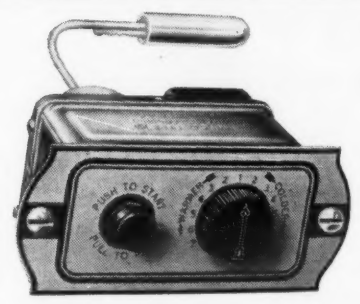
CINCINNATI — Appointment of Frank D. O'Sullivan, Jr., as southeastern regional manager for Crosley Division, Avco Mfg. Corp., has been announced by C. W. Kirby, sales manager.

F. D. O'Sullivan

O'Sullivan will cover distribution outlets in Atlanta and Savannah, Ga., Charlotte, N. C., Jacksonville, Tampa, Orlando, and Miami, Fla., Birmingham, Jackson, Miss., Memphis, and New Orleans.

For Water Cooler Replacements

Choosing the right control is the most important part of any replacement job. That's why it pays to check with Ranco first, for there's a Ranco Replacement Control for every installation. The Ranco Type KW-413, for example, is designed especially for use on water coolers, with lowest cut-out at 29°F., highest cut-in at 65°F. Have your Ranco wholesaler show you the KW-413, and other Ranco Replacement Controls.

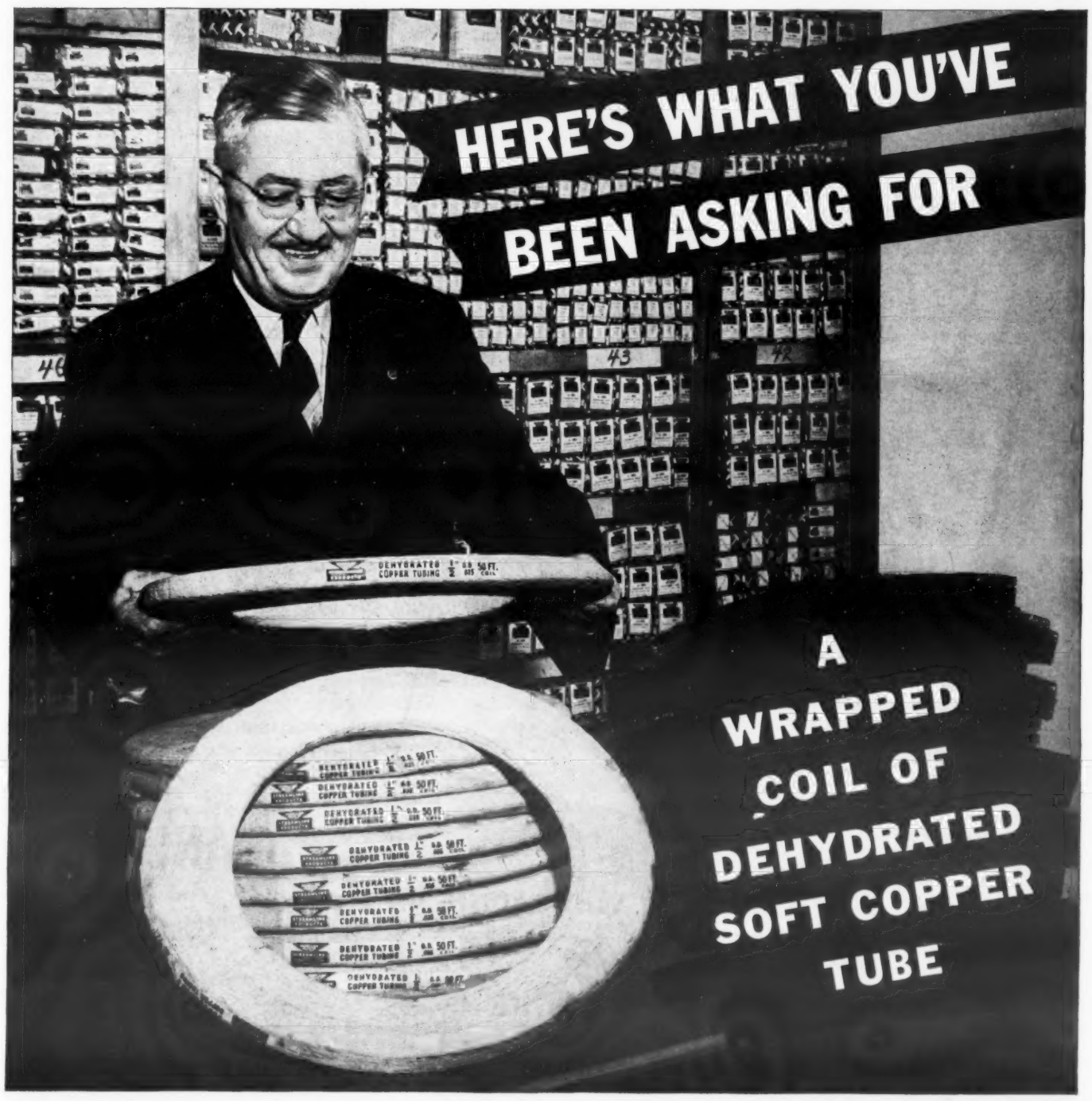


Ranco Type KW-413 Temperature Control, for water coolers. Simply designed and precision-built for ease of installation and dependable, trouble-free service.

✓CHECK with Ranco FIRST

★ Specialists in Refrigeration
★ Dependability
★ Greater Customer Satisfaction
★ More Ranco Controls In Use
★ Less Stock To Carry
★ More Profit For You

Ranco Inc. COLUMBUS 1, OHIO — World's Largest Manufacturers of REFRIGERATION CONTROLS



Mueller Brass Co. Dehydrated Copper Tubing is now conveniently available at your wholesale refrigeration dealers.

Dehydrated Copper Tubing of our manufacture is bright, clean, and as dry as is humanly possible to make it. It is annealed dead soft so that it can be easily formed or bent. It will flare without fracture.

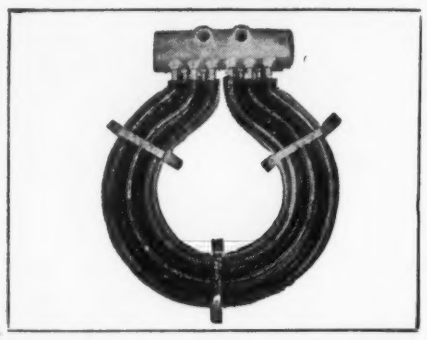
It is furnished in bunched coils carefully wrapped and protected for shipping and stocking. It is manufactured in the following sizes:

1/8" to 3/4" inclusive .035 wall 50' lengths

Order through your wholesaler.

MUELLER BRASS CO.
PORT HURON, MICHIGAN

ROME-CONDENSER
★ Jointless Type ★



Rome Water Cooled Condenser Coils insure trouble-free condensing equipment. Used by leading compressor manufacturers

ROME-TURNEY RADIATOR COMPANY
222 CANAL ST.
ROME, N. Y.

EXPERIENCED MEN CAN SERVE YOU BEST

COMPLETE LINE OF REFRIGERATION SUPPLIES TOOLS AND ACCESSORIES

EACH MONTH THIS FELLOW APPEARS IN
THE LIQUID LINE
THE INDUSTRY'S OLDEST HOUSE ORGAN
ARE YOU ON OUR MAILING LIST?

WEST COAST SUPPLY JOBBERS SINCE 1928

REFRIGERATION SERVICE INC.
3109 BEVERLY BLVD
LOS ANGELES 4 CALIF.

Booklet Supplies Data On Farm Pump Uses

CHICAGO—"Running Water, The Farm Necessity," is the new promotional booklet issued by the Electric Water Systems Council, 35 E. Wacker Drive here, as a continuation of its efforts to keep the advantages of running water under pressure prominently before the nation's farmers.

The booklet tells the farmer exactly "What Running Water Can Do For You! In Your Home—On Your Farm." Repeated throughout the booklet at the bottom of each page is the secondary theme—"One Kilowatt Hour Can Pump and Carry 1,000 Gallons of Water."

First feature of the booklet is a description of what running water can do for the farmer of America. His 12 needs for running water are vividly described in brief paragraphs that throw a Sunday punch by giving figures in brief on gallons of running water needed for operating the modern farm.

Secondly, the booklet deals with "How Much Water Will You Require?" This section points out that "when you 'pump and carry' you use as little as possible, but when you 'turn a faucet' you use as much as you need." Here the farmer can see for himslf the approximate amount of water required for his needs: the number of gallons for each horse, cow, hog, sheep, each 100 chickens; the amount of water needed for the home plumbing fixtures—the lavatory, bathtub, shower, flushing water closet and finally, the yard fixtures—the ¾ in. hose with nozzle, and the average lawn sprinkler.

Refrigeration Problems

And Their Solution

By P. B. Reed

For Service and Installation Engineers

Manager, Refrigeration and Air Conditioning Division, Perfex Corp.

Refrigerant Cylinders

(Continued)

Going back, we found that our 1 cu. ft. cylinder was liquid-full at 100°, if it had in it as many pounds of water as the "liquid density" of water at 100°.

If the cylinder should never get warmer than 100°, hydrostatic pressures would not develop, so there would be no danger. If, however, we decided that the cylinder of water might, at some time get up to 130°, we could put only 61.5 pounds of water in the cylinder instead of 62 pounds. Then it would become liquid-full at 130° instead of at 100°.

LIQUID-FULL TEMPERATURE FIRST CONSIDERATION

So we must first decide the maximum temperature to which we think that the cylinder will rise, and then put in the cylinder only as many pounds for each cubic foot of internal volume of the cylinder, as the liquid density of the water or other liquid at that temperature.

Of course we will have to build the cylinder to withstand saturation pressure of the vapor up to the maximum temperature that we select, but we will not get the enormous hydrostatic pressures. Although we may get up to the liquid-full temperature the maximum pressure will be the vapor pressure corresponding to that temperature, and not the rapidly mounting hydrostatic pressure.

Figs. 8, 9, and 10 show a cylinder for "Freon-12" having an internal volume of 1 cu. ft. We decide that the temperature will never go above 130°. In the tables for "Freon-12," we find that the liquid density of "Freon-12" at 130° is 74.5 pounds per cubic foot, so we can put 74.5 pounds of "Freon-12" in the cylinder and not get liquid-full conditions until we reach 130° as shown in

If the temperature should go above 130°, hydrostatic pressures will develop. Experiments indicate that during the first 10° above liquid-full condition, the pressure goes up 1,000 pounds per square inch. That is, at 140° instead of the pressure being 205.5 p.s.i.g. the vapor pressure at 140°, it would be almost 1,200 pounds per square inch—if the cylinder has not burst by that time!

At 60°, the liquid density of "Freon-12" is 81.4 pounds per cubic foot. If we put this 1 cu. ft. cylinder having in it 74.5 pounds of "Freon-12," in a 60° room, the "Freon-12" starts to shrink in size as it cools.

When it gets down to 100° it will occupy only 94½% of a cubic foot and the pressure has dropped to 116.9 p.s.i.g. At 60° the "Freon-12" has shrunk even further and now occupies only 91.5% of the volume of the cylinder, and the pressure is now 57.7 p.s.i.g.

Effect of Temperature on Hydrostatic Pressures

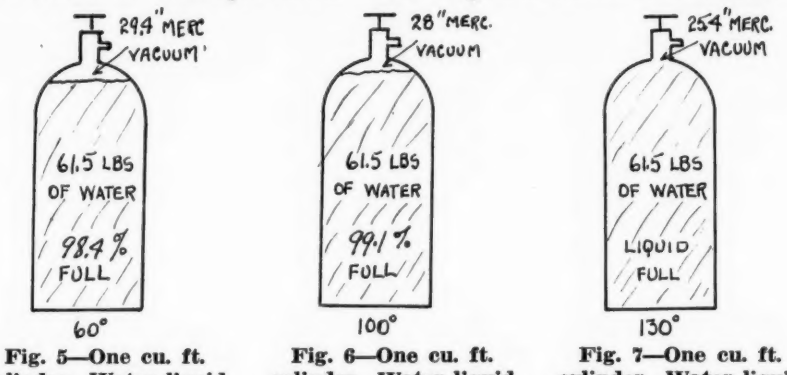


Fig. 5—One cu. ft. cylinder. Water liquid density=62.4 lbs./cu. ft.

Fig. 6—One cu. ft. cylinder. Water liquid density=62 lbs./cu. ft.

Fig. 7—One cu. ft. cylinder. Water liquid density=61.5 lbs./cu. ft.

MAXIMUM FILL = VOLUME × LIQUID DENSITY AT SELECTED TEMPERATURE

So the amount of refrigerant, any refrigerant, that can be safely put into a cylinder, is the internal volume of the cylinder multiplied by the liquid density of that refrigerant at the maximum temperature to which the cylinder and refrigerant can rise.

TABLE 4

	Liquid Densities				
Refrigerant	**130°**	**140°**	**150°**	**160°**	**170°**
Ammonia	34.7	34.0	33.4	32.7	32.0
Sulphur Dioxide	79.9	78.7	77.6	76.4	75.2
Methyl Chloride	53.0	52.2	51.4	50.6	49.6
"Freon-12" ...	74.5	72.7	70.9	69.1	67.3

Table 4 shows the liquid densities of a few refrigerants, at 130, 140, 150, 160, and 170 degrees. Thus, to protect against hydrostatic pressures above any of these temperatures, it is necessary only to multiply the internal volume of the cylinder in cubic feet by the liquid density of that refrigerant at the chosen maximum temperature.

Examples:

1. 1.3 cu. ft. cylinder, "Freon-12" maximum temperature, 130°
   2 x 74.5 = 96.8 pounds.
2. 1.9 cu. ft. cylinder, sulphur dioxide maximum temperature, 140°
   1.9 x 78.6 = 149.3 pounds.
3. 2.5 cu. ft. cylinder, methyl chloride maximum temperature, 160°
   2.5 x 50.6 = 126.5 pounds.

ICC TEMPERATURE BASES

When the ICC regulations governing the amount of refrigerant that could be put in a cylinder, was first brought out some years ago, the amount of ammonia allowable in a cylinder was based on a maximum temperature of 146° and sulphur dioxide also 146°. That is, the amount of ammonia or sulphur dioxide that could be put in a cylinder must be no more than will make it liquid-full at 146°. For ammonia this was an allowable filling amount of 33.7 pounds per cubic foot; for

(Continued on next page)

DRIERS AND STRAINERS

Electrimatic now has available a deluxe line of all brass-copper Refillable and Non-Refillable Driers ranging in size from 3 cu. in. to 50 cu. in. Also available are four different types of all brass Strainers. See our catalog for complete information.

BUY FROM YOUR WHOLESALER

Electrimatic
2100 INDIANA AVE. CHICAGO 45, ILL.
CANADA—2025 ADDINGTON AVE., MONTREAL

GET ALL THE

Metallurgical Facts...

AND YOU WILL KNOW WHY LADISH
Controlled Quality
FORGED STEEL FITTINGS STAY IN SERVICE LONGER

Fact Rigid laboratory control of forging processes increases strength and toughness.

Fact Controlled grain flow provides maximum resistance to shock, strain and stress.

Fact Dense, homogeneous metal structure retards action of erosion and corrosion.

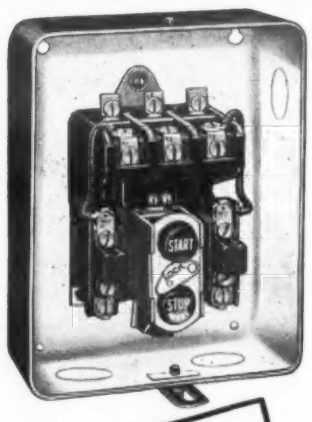
Ample Stocks... Prompt Service... Carbon, Stainless and Alloy Steels ⅛ through 4 inches, 2000 through 6000 pounds.

Write for Catalog, Vol. 2, Today

LADISH CO.
CUDAHY, WISCONSIN (MILWAUKEE SUBURB)
District Offices: NEW YORK • BUFFALO • PITTSBURGH • CHICAGO • PHILADELPHIA CLEVELAND • ST. LOUIS • HOUSTON • NEW ORLEANS • LOS ANGELES
STOCKED AND SOLD BY LADISH DISTRIBUTORS IN PRINCIPAL CENTERS

MANUAL STARTERS WITH PUSH BUTTONS

that provide dependable overload protection



These compact, hand-operated starters have two convenient push buttons . . . START and STOP . . . that operate the switch mechanism. Press the START button and the silver alloy contacts close with a quick snap. Press the STOP button and the contacts open with the same positive action. Two overload breakers automatically open the switch in case of sustained overload. Just what you need for single-phase or three-phase air-conditioning and refrigeration motors. Send for Bulletin 609.

Allen-Bradley Co., 1313 South First Street, Milwaukee 4, Wisconsin.

ALLEN-BRADLEY MOTOR CONTROLS
for Air-Conditioning and Refrigeration.
Manual & automatic across-the-line starters.
Compression-type velvet-smooth starters.
Pressure and temperature switches & controls.
Relays and contactors from 1 to 8 poles.
Push buttons and selector switches.

A-B Quality

ALLEN-BRADLEY
SOLENOID MOTOR CONTROL
QUALITY

Pressure Changes In Refrigerant Cylinders

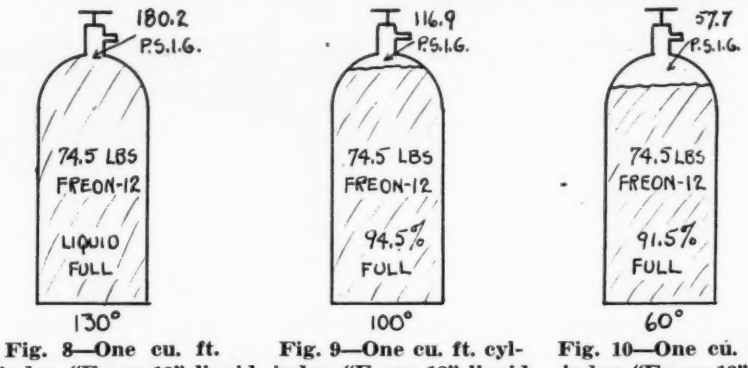


Fig. 8—One cu. ft. cylinder. "Freon-12" liquid density=74.5 lbs./cu. ft.

Fig. 9—One cu. ft. cylinder. "Freon-12" liquid density=78.8 lbs./cu. ft.

Fig. 10—One cu. ft. cylinder. "Freon-12" liquid density=81.4 lbs./cu. ft.

Cylinders--

(Continued from preceding page)

sulphur dioxide this was 78 pounds per cubic foot.

When methyl chloride was first put into the regulations the amount that could be put in a cylinder was based on approximately 196° or an allowable weight of 46.8 pounds per cubic foot of cylinder volume.

A couple of years ago this was changed to a maximum temperature of 138° instead of 196°. This increased the allowable amount from 46.8 to 52.4 pounds per cubic foot of cylinder volume. Isobutane was originally allowed 28.7 pounds per cubic foot which would not allow the cylinder to become liquid-full until it rose to 196°, and this has not been changed.

When the "Freons" were introduced, "Freon-12" was allowed 74.2 pounds per cubic foot, which allows the cylinder to become liquid-full at 132°.

Finally, rather than establish separate individual amounts of fill for each new refrigerant, it was put into the regulations that the amount of any refrigerant put into a cylinder should not be enough to cause that cylinder to be liquid-full at less than 130°, so all refrigerants not specifically named or for which a specific amount per cubic foot is not provided, may fill up to an amount that, at 130° will not completely fill the cylinder with liquid.

Why all these differences? The regulations just have not been revised. There is no valid reason for these differences that now exist. They just have not been gone over and the inconsistences ironed out.

There may be some reason for permitting a lower maximum temperature for a non-flammable, non-toxic refrigerant like "Freon-12" for example, than for a highly flammable, toxic refrigerant like propane. The ultimate and secondary danger of fire and other hazard would seem to indicate that the maximum allowable temperature at which the cylinder becomes liquid-full, can safely be lower for "Freon-12" than for propane.

NO REFRIGERANT SAFE FROM HYDROSTATIC PRESSURES

On the other hand the primary result, the expolsion itself, can kill a man just about as quickly with "Freon-12" as with propane.

It is fair, and in order, to examine this maximum temperature. Is the present 130° high enough? That depends on the type of safety device.

If the safety device is a pressure actuated device, such as a pressure relief valve, and it is set for, say, 275 pounds per square inch, then it would open before hydrostatic pressure starts, or gets high enough to cause any danger to a cylinder, tested to 500 or 600 pounds per square inch.

Some cylinders are protected by self-resetting relief valves that open and purge off the excessive pressure and then close when the pressure gets down to normal. This would be soon, for the rapid purging causes the liquid refrigerant to boil and thus refrigerate itself.

Some cylinders are protected by "rupture discs," a small disc of thin metal that bursts at a comparatively low pressure. When it goes, the entire charge escapes.

If it is a temperature device that opens at, say 135° and allows the refrigerant to purge out, 130° is probably not too low. If it doesn't open until, say 160° then terrific pressures can develop in the interval between 130° and 160°, so that the cylinder could explode at perhaps 140° and yet the safety device would not be ready to open for another 20°.

The temperature operated safety device is usually a "fusible plug," which consists of a small brass or steel plug with ⅛ or ¼ tapered pipe thread. This fitting has a conical hole through it, filled with a soft, solder-like metal that melts at about 160°. Then the pressure blows the melted metal out, and allows the cylinder to purge. Like the rupture disc, when the fusible plug goes, the entire charge in the drum escapes.

The more refrigerant that we put in a cylinder the lower is the temperature at which it becomes liquid-full and, therefore, potentially dangerous. If we should fill the cylinder only two-thirds full, it would have to get quite hot before the liquid expands enough to entirely fill the cylinder. Before it gets that hot the fusible plug will have melted and released the entire charge.

Obviously, the pressure actuated relief valve, or "spring release" as it is sometimes called, offers the most positive protection, for it is pressure that bursts cylinders. If the cylinder has some liquid refrigerant in it and also some gas space, a rise in temperature (saturation) is accompanied by a pressure rise, but actually it is excessive pressure that we must guard against. Then too, the spring release valve resets itself, when the pressure is no longer excessive and thus prevents loss of the entire cylinder full of refrigerant.

Accidents from bursting of refrigerant cylinders happen quite frequently. A man can be badly hurt or even killed. At best he may suffer minor injuries, discomfort or loss of time from his job.

ICC FILLED CYLINDERS MAY BECOME DANGEROUS

These accidents are usually blamed on carelessness of the man himself or others in overfilling. There is little doubt but that in most cases this is true, but it can be seen from the above that if a cylinder is filled with a refrigerant for a maximum temperature of 130°, 132°, or 138° for example, in accordance with ICC regulations, that cylinder can become dangerous if it is exposed to the direct rays of a summer sun, in the open or under glass, as in a sedan, placed near a furnace or heat source, or if a flame from a torch is played directly on it or in any other way becomes warmer than 130°, 132°, or 138°. It may get hot enough to burst and yet not hot enough for the fusible plug to melt.

The only protection that cylinders have that are equipped with fusible plugs, between the temperature at which the cylinder becomes liquid-full and 160° the melting point of the fusible plug, is the elasticity of the walls of the cylinder. They will stretch some, but it is hazardous to rely on so slim a protection.

Table 5 shows the temperatures at which ICC filling regulations allow a cylinder to become liquid full. Care must be taken to see that cylinders filled to ICC permissable capacities, *must* not be allowed to become warmer than these temperatures.

TABLE 5

Temperatures at which cylinders filled according to ICC regulations become liquid-full of refrigerant.

Refrigerant	Temperature
Isobutane	196°
Ammonia	146°
Sulphur Dioxide	146°
Methyl Chloride	138°
"Freon-12"	132°

(All other refrigerants, not specified in Tariff 4, based on 130°.)

(To Be Continued)

Opens New Repair Shop

CANTON, N. Y.—Richard Jebo has opened a refrigerator repair and motor service shop at the rear of the Barbour block on Hodskin St. here. Jebo is a veteran of World War II.

Fine PRODUCTS DESIGN-ENGINEERED FOR RUGGED SERVICE

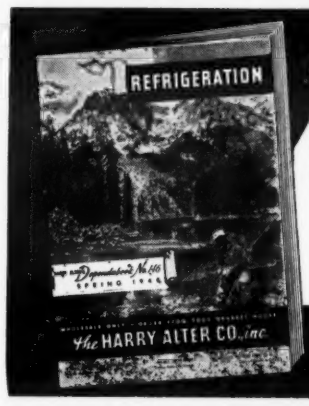
You'll find every practical feature in

RAPID Refillable DEHYDRATORS

. . . Really dehydrate because balanced dimensions provide maximum dispersion area, thorough contact with silica gel. Sturdy one-piece, leakproof shell, triple sealed, truly non-collapsible. Removable, large area, finger type screens permit complete cleaning, prevent damage. Bronze reinforcing spring in outlet screen.

YOUR WHOLESALER has Rapid Dehydrators in eight practical sizes: 5, 10, 20, 30, 40, 50, 125, 200 cu. in. Type number stamped on each for easy recognition

Fine PRODUCTS CO.
185 NORTH WABASH • CHICAGO 1, ILLINOIS



IT'S OUR GREATEST SPRING DEPENDABOOK NO. 146

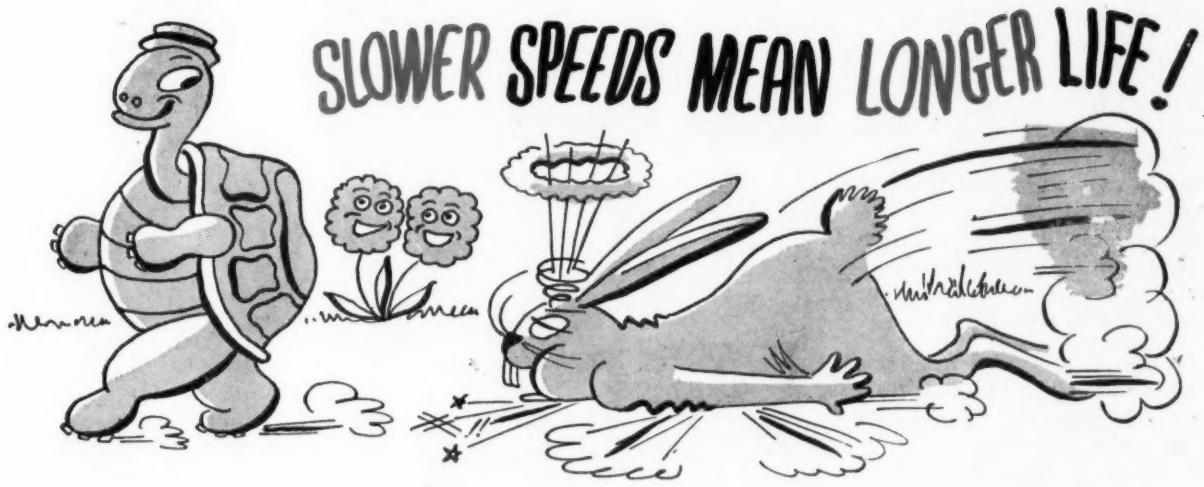
AMERICA'S FINEST SOURCE FOR REFRIGERATION, AIR CONDITIONING and ELECTRIC MOTOR Parts and Supplies

Write for your copy today on your letterhead, please

THE HARRY ALTER COMPANY, INC.
1728 S. Michigan Ave., Chicago 16, Illinois
134 Lafayette Street, New York, 13, New York

BRUNNER SINCE 1906 REFRIGERATION helps you serve better

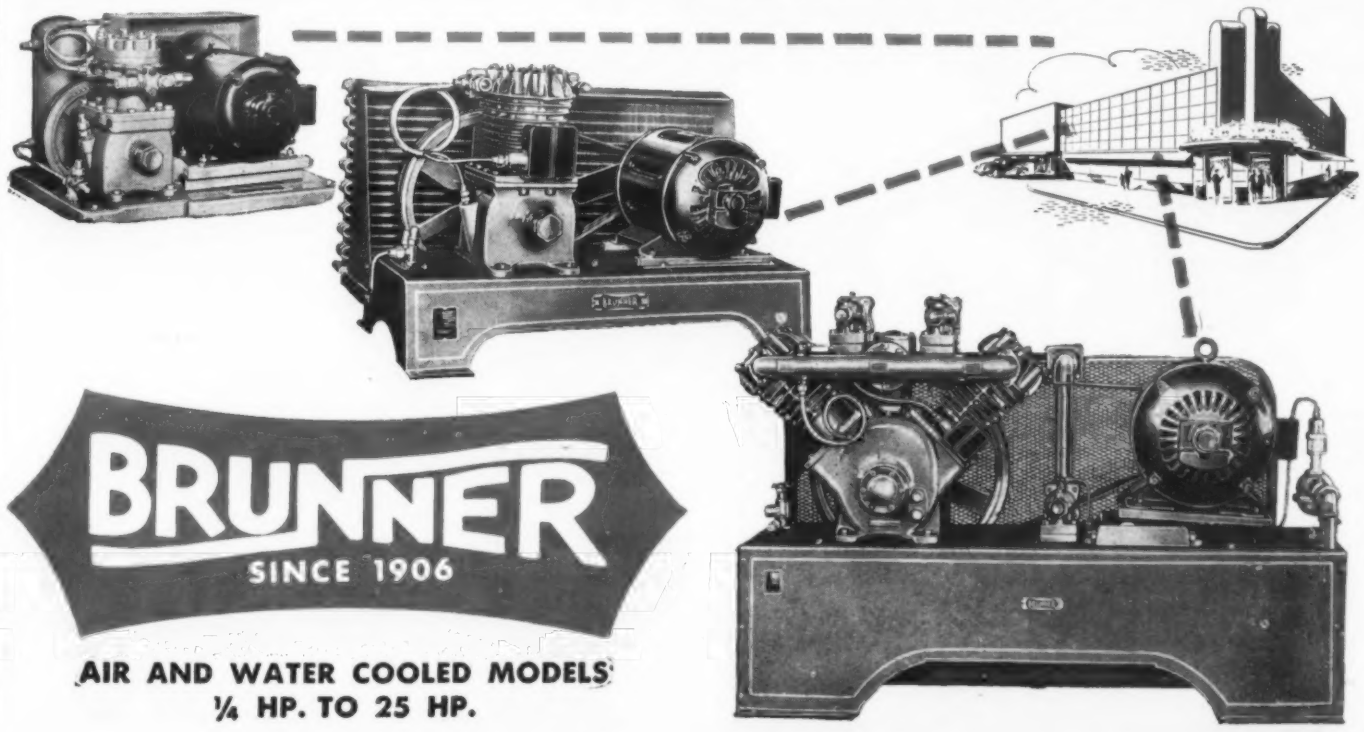
Memo to Shrewd Business Men



No fairy tale this: you use refrigeration units in your business only because they are essential to a profitable operation. Pump speeds, condensor tubes, suction areas, and other technical contributions to "slower speeds mean longer life" we'll leave to Brunner's factory representative to explain in detail.

Here is today's version: refrigeration units are too important for hurried selection. Slow up, take time to *compare* design and construction details. *Check* the experience of other users. Longer life comes with profitable, worry-free installations; prompt deliveries; long-lasting customer satisfaction. *Write us.* Spend a few minutes with Brunner's representative and know why plant capacities have been greatly increased.

BRUNNER MANUFACTURING CO.
Utica 1, New York, U. S. A.



BRUNNER SINCE 1906

AIR AND WATER COOLED MODELS
¼ HP. TO 25 HP.

10 DAY SERVICE

Factory Rebuilt Units $42.50
(ALL MODELS EXCEPT "C")

- Genuine Grunow Parts.
- Guaranteed 6 months.
- Just unfasten bolts holding board and ship complete.
- Write for Service Manual and name of nearest Distributor.

GRUNOW
AUTHORIZED SERVICE, INC.
4313 W. Fullerton Ave., Chicago 39, Ill.

odorless

Jarrow...
Refrigerator Door Gaskets Are Again Made From Crude Rubber

Always Demand These Quality Gaskets

JARROW PRODUCTS
420 N. LA SALLE ST., CHICAGO 10, ILLINOIS

What's New

Ideal Voltage Tester Also Checks Circuits, Current

* * *

SYCAMORE, Ill.—A new voltage tester which can be used also for several other electrical tests has been introducd by Ideal Industries, Inc. here.

The tester can be used for determining voltage from 110 to 550 volts a.c. and 110 to 600 volts d.c., for determining whether line is a.c. or d.c., checking continuity of circuits, blown fuses, grounded side of line, motor, or appliance, excessive leakage to ground, frequency (25 or 60 cycles), and d.c. polarity.

Indications are given by a solenoid indicator and a neon test lamp. For example, with the test prod points connected to the line, the solenoid indicator will pulsate if the line is a.c. but not if it is d.c. Also, only one electrode of the neon lamp glows if the line is d.c.

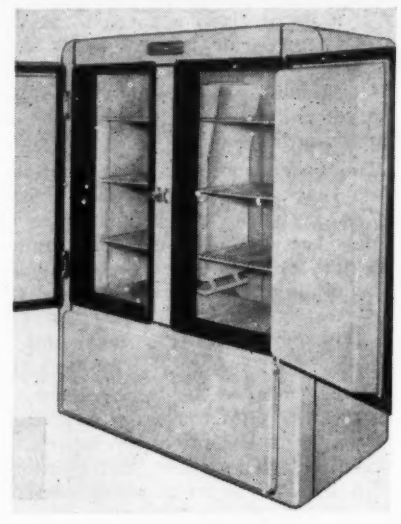
Voltages are shown by the position of the indicator on the scale or by the brightness of the neon lamp.

The tester is contained in a plastic case and measures 6 in. over-all in length. Leads are 2 ft. long, test prods 2 in. long with 4-in. handles. Points of the prods are sharp enough to pierce insulation. Total weight is 8 oz. and the tester is supplied with a carrying case fitted with a belt clip.

Wilson Makes All-Purpose Reach-In Refrigerator

SMYRNA, Del.—Wilson Refrigeration, Inc. is now in production on a reach-in all-purpose refrigerator to be known as the Stor-Safe.

Designed for use in stores, restaurants, taverns, clubs, institutions, and large homes, the refrigerator features a demountable front which may be removed to allow ready passage through ordinary doorways. Interior of the box provides 24.5 gross cu. ft. storage space with 23 sq. ft. of shelf area, according to the manufacturer.



Wilson Stor-Safe

Also said to be of interest is the forced air cooling with the compact cooling unit mounted back of the center mullion where it occupies a minimum of usable space. Design of the cooler assembly, the company points out, assures proper circulation of clean, cold, moist air to maintain ideal temperature and humidity conditions throughout the storage area. Manual defrosting is unnecessary, it is claimed.

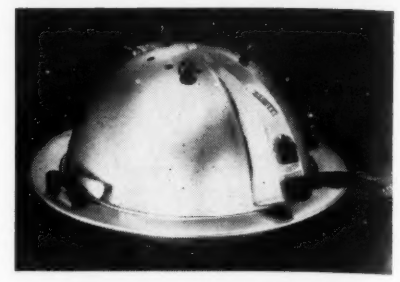
Insulation is 4¾ in. of semirigid Fiberglas; finish is white Dulux refrigerator enamel, with chrome finished hinges. Interior light is provided and an adjustable temperature control assures desired temperatures, Wilson points out.

Prevore Electric Broiler Has 6-Way Table Use

BROOKLYN — Prevore Electric Mfg. Corp. here is manufacturing a fully automatic electric Roaster Broiler, No. R5A, which it claims is suitable for roasting, broiling, baking, cooking, grilling, and frying right at the table.

Simply dial your heat and the "superaccurate" thermostat holds the temperature exactly as set, with the current on only about 50% of the time, the manufacturer explains. Four cooking degrees are available on the heat adjuster dial, which controls the 1,000 watt black glazed heating unit.

A roasting pot, adjustable two-way wire grill, and a drip plate with gravy well are included to make the broiler-roaster adaptable for six-way table use. Top of the model R5A is equipped with detachable hinge.



Prevore Roaster Broiler

Exterior of the unit is of chromium with bakelite trim, and it is provided with heat resisting mat. For use on a.c. only, the appliance retails for $31.37.

Conditioner Can Be Installed In Window or Room

DAYTON, Ohio—A new high capacity, air-cooled room air conditioner which is claimed to be the only one on the market that can be installed in any type window or totally within any room, is now being marketed by Chrysler Airtemp.

The ¾-hp. unit features the Chrysler Airtemp sealed radial compressor which has no drive belts or shaft seals and whose special mountings are designed on the principle of the Chrysler "floating power" suspension.

The unit ventilates, circulates, filters, and dehumidifies automatically. Its supply air grille is said to be unique in design. A wide range adjustment permits the user to direct the flow of cooled air to any desired part of the room, the report said.

Weighing less than 200 lbs. the unit is made almost entirely of aluminum and is designed to occupy minimum space. The cabinet has a two-tone finish intended to harmonize with other furniture in the room.

New Features Added to Parsons Kitchen Units

* * *

TRAVERSE CITY, Mich.—Several new features and improvements on the all-electric Parsons kitchen units were announced recently by John A. Rishel Jr., sales manager for the Parsons Co.

The kitchens now are equipped exclusively with Universal Cooler and Tecumseh hermetically-sealed refrigerating systems.

A complete new line of chrome streamlined hardware is being installed. Model No. P-1060 is equipped with triangular-type "AT" electric elements. All models have spring-flo gopher faucets, improved ventilation, and the new du Pont Dulux finish.

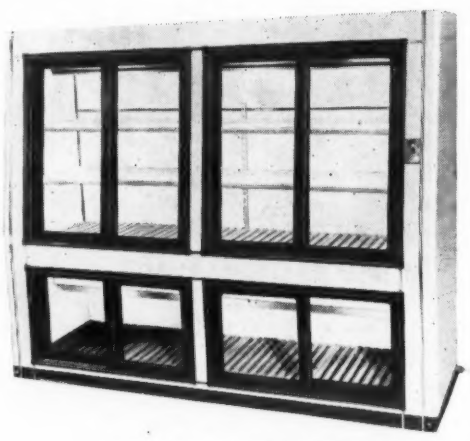
THEY BUY

WHEN THEY SEE OUR LABEL COLDIN YOUR KEY TO BETTER REFRIGERATION

You bet they buy! That's because storekeepers know COLDIN Cabinets and Show Cases. They have seen them in operation and were amazed at its modern beauty, maximum refrigeration and it's ideal convenience for serving the trade efficiently and promptly.

What a pretty picture this paints for you! Look at it in terms of extra sales and profits and you'll agree that it's wise to feature COLDIN Cabinets and Show Cases.

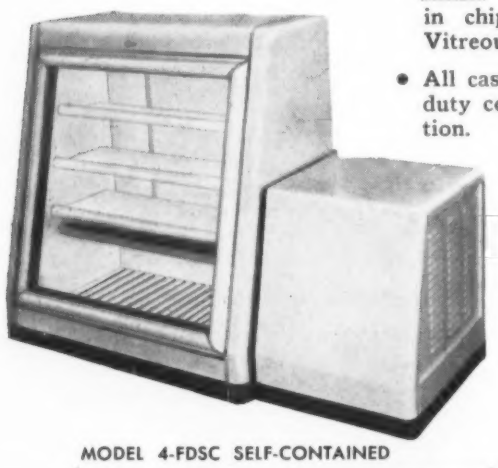
So now we're ready for double-barreled selling action, Mr. Dealer! We offer our ever popular Show Cases, advertising and the kind of promotion that adds up to more sales! Come along! COLDIN is going places FAST!



MODEL RS-5 SELF-SERVICE OR FLORIST CASE

COLD FACTS ON COLDIN CABINETS AND SHOW CASES

- Triple baked high gloss enamel
- All double-duty show cases have the new ideal Zapon Duranite-H finish. It's better than porcelain in chip-resistance and flexibility. Vitreous porcelain interiors.
- All cases are equipped with heavy duty coils for maximum refrigeration.



MODEL 4-FDSC SELF-CONTAINED

IMMEDIATE DELIVERY

MODEL DD-6 BUTCHER CASE

MODEL 4-FD FULL VISION CASE

MODEL 10-SCSU SELF-CONTAINED STORE FREEZER

MODEL RS-5 FLORIST CASE

MODEL 6-HI 6 HOLE ICE CREAM CABINET

FRANCHISES ARE STILL AVAILABLE FOR CERTAIN TERRITORIES

WRITE OR CALL FOR OUR LATEST LITERATURE.

COLDIN CABINET CO., Inc.

2800 WEBSTER AVENUE, BRONX 58, N. Y.

TEL. SEdgwick 3-5833

CLARK BRIDGMAN CO.

549 W. WASHINGTON BLVD.

CHICAGO 6, ILL.

Sales and Engineering

Product Coolers, Evap. Condensers

Air Conditioning, Liquid Coolers

Water Chillers, Heat Exchangers

Liquid Receivers

A. A. Reed, 14 Poplar Park, Pleasant Ridge, Mich.

R. R. Gregory, P. O. Box 164, Easton, Ill.

R. E. Kenney, 4243 Crocker Ave., Minneapolis, Minn.

Superior

VALVES, FITTINGS and ACCESSORIES For All Refrigeration and Air Conditioning Systems

146

Superior Valve and Fittings Co.

PITTSBURGH 26, PENNA

FOR LIVE WIRES ONLY!

BUXTON OFFERS 3 GREAT NEW REFRIGERATORS

- NEW ENGINEERING FEATURES
- NEW STREAMLINING
- COMPACT DESIGN

WE WANT DISTRIBUTORS

We will franchise alert distributors and dealers for this market-designed line . . . a really unusual opportunity to deliver top-quality merchandise to an established market.

TOP SALES FEATURE

Space Requirement of Average 12 cu. ft. Refrigerator —Yet Provides Almost TWICE the Capacity

Combination—Half Zero Half Normal—19 cu. ft. All Zero—18 cu. ft.

WRITE OR PHONE TODAY

For complete details—descriptive literature, price lists, territories available write or phone E. George Sanders, General Sales Mgr. at 3120 N. Main St., Dayton, Ohio. (Temporary nat'l sales office.) Phone Randolph 2147.

Buxtonaire

Dry Cooler for Bottled Beverages and Food Products.

Manufactured by

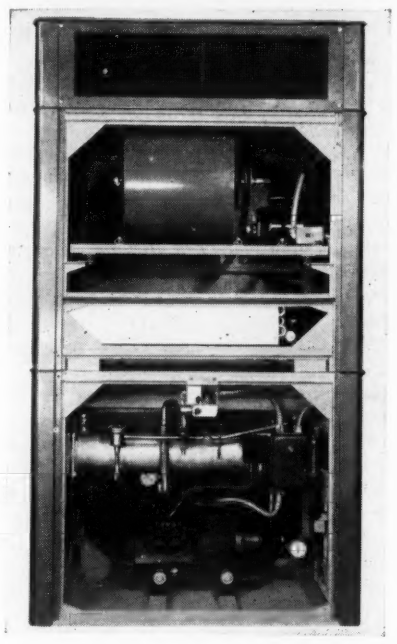
BUXTON, INC.

1900 E. 48th St., Los Angeles 11, Calif.

(Phone Lucas 8158)

What's New (Con't)

American Thermal Adds 3 Packaged Units to Line



* * *

DETROIT — Three new packaged air conditioners featuring sealed compressors, have been added to the Ameri-therm line, Emanuel Feinberg, president of American Thermal Industries, has announced.

These units, of 3, 5, and 10-ton capacity, incorporate an original control system that is said to insure reduced pressure starting and elimination of refrigerant "slugs." They are completely equipped at the factory but can be separated into sections, if desired, for remote installation, according to Feinberg.

In addition to these units, the Ameri-therm line of packaged air conditioners includes 3 and 15-ton models. Feinberg said that territories are still open for dealers, distributors, and factory sales representatives.

Insulation Vapor-Sealed In Frozen Food Cabinet

* * *

DETROIT—An improved model of its 8-cu. ft. serve-self frozen food display case is now being introduced by Freez-rite Incorporated here.

This small sized unit is particularly designed for special locations in markets of food stores for promotion of frozen foods, but it has also been successfully used in drug stores and other outlets for self-serve ice cream sales, the company says.

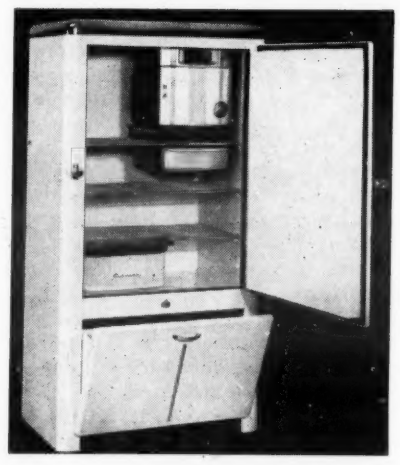
The cabinet measures 48 in. long, 27 in. deep, and 52 in. high to the top of the mirrored superstructure. Height to the top of the food compartment in front is 35 in.

All-aluminum structure is a special feature of this cabinet, designated as Model FD8, the complete assembly weighing approximately 225 lb. This is a self-contained model, being powered by a "Freon-22" hermetic machine.

Food compartment is divided into three sections by freezer plates, and the company's method of vapor-sealing the 4 in. of Fiberglas insulation is claimed to effectively keep top level packages at low temperature.

Fluorescent lighting in the cabinet illuminates the plate glass mirrors, merchandise compartments, and the display sign at the top of the superstructure.

Ultra-Cold Introduces New 8-Cu.Ft. Household Model



* * *

LOS ANGELES — Ultra-Cold, Inc. announces a new addition to its line of refrigerators—the model 81-S, a deluxe, household refrigerator with a capacity of over 8 cu. ft.

Features include a 6-tray ice maker, a meat storage bin, a crisper for leaf vegetables, a bin for root vegetables, and a frozen food compartment. The model 81-S, with baked enamel surfaces, inside and outside, has a top of highly polished stainless steel. It is 60 in. high, 30 in. wide, and 23 in. deep.

St. Louis Firm Enters Air Conditioning Field

ST. LOUIS — Comfort-Aire, Inc., 614 S. Vandeventer, headed by C. G. Bicket and A. Bicket, is a newly incorporated firm to manufacture and install refrigeration and heating equipment.

for packaging meats, poultry and fish in home or farm freezers and lockers...

ZER-O-PAR

moisture-vapor-proof
prevents dehydration
pliable—wraps easily
heat sealable
no outside wrapping required
pure white

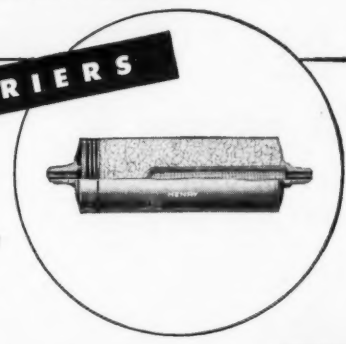
it has everything!

available in consumer and locker plant sizes

SAFEWAY PRODUCTS DIVISION • YORKVILLE PAPER CO., INC.
431 East 77 Street, New York 21, N. Y.

Have you noticed when refrigeration men get together and discuss among themselves the merits of various refrigeration and air conditioning products that those bearing the Henry name are always held in high regard?

DRIERS



• Patented features available in most Henry Driers include dispersion tube which prevents channelling in the dehydrant; the Abso-Dry Process which permits a drier to prove its dryness with a hiss; the compression spring which minimizes self-abrading of dehydrant; and the distortion proof flange on larger models which absorbs strains caused by excessive or uneven tightening of bolts. It costs no more to take advantage of these Henry features.

Sold by leading wholesalers

HENRY VALVE COMPANY

Control Devices, Valves, Driers, Strainers and Accessories for Refrigeration and Air Conditioning and Industrial Applications.

3260 W. Grand Ave., Chicago 51, Ill. • Cable: HEVALCO Chicago

THE MASTER SERVICE MANUALS - - -

— — — and other books of the Refrigeration Library are depended upon as textbooks in trade schools from coast to coast.

BUSINESS NEWS PUBLISHING CO., DETROIT

Here's a Profitable Item You Can Sell....

You've watched the expansion of rural electric facilities with one eye while keeping the other peeled for electrical equipment that farmers will buy. And you know what they want most. Labor-saving appliances . . . things that will do the job better and faster, things that will help them increase production and make more money.

Here is a profitable big ticket item for which there is, and will continue to be, a *big demand.* The reason is obvious. Faced with tightening city and state health regulations, losing money through downgrading and milk spoilage, dairymen are turning to Master-Bilt Electric Milk Coolers for a practical answer to their problems.

Master-Bilt, as the name implies, is a product of master craftsmen. Ruggedly constructed and simple in design, it provides automatic cooling that is quick, safe, economical and dependable. Best of all, you can *buy* and *sell* Master-Bilt Milk Coolers *now!*

There are still opportunities for Master-Bilt distributor and dealer outlets. Your locality may be one. To find out, write or wire today.

Ten popular models available. Cabinet pictured provides cooling and storage space for 4 cans of milk.

MASTER-BILT REFRIGERATION MFG. CO.

920 PALM STREET • • SAINT LOUIS 7, MISSOURI

REFRIGERATION AND AIR CONDITIONING
UNITS • PARTS • TOOLS • SUPPLIES

More and more Servicemen Count on AIRO

"We honestly find it more convenient, and infinitely more satisfactory in every way, to buy from your firm in Chicago, rather than chase around *trying to find* similar material here." Washington, D. C. Dealer

NOW READY
New 48A Catalog
Please write on your letterhead for YOUR copy.

Count on AIRO to get you the right parts... and all the parts. Avoid chasing around town and save valuable working hours, which you can devote to NEW BUSINESS.

Use the *big* AIRO catalog to order replacement parts *after working hours!* Make daylight hours more profitable by letting AIRO *serve you!*

AIRO SUPPLY CO., Inc.
AIRO SELLS WHOLESALE ONLY!
2732 N. ASHLAND AVE., CHICAGO 14, ILLINOIS

PRECISION • PERFORMANCE • PERMANENCE

Refrigeration products bearing the Larkin insignia may be depended upon to function flawlessly. Originator of the patented Cross Fin Coil, Larkin also instills the same exacting quality in Humi-Temp Forced Convection Units — Bare Tube and Zinc Fused Steel Plate Coils — Instantaneous Water Coolers — Air Conditioning Units — Evaporative Condensers — and other mechanical facilities for efficient commercial and industrial refrigeration.

LARKIN COILS
519 MEMORIAL DRIVE • S•E•
ATLANTA • GEORGIA

Fundamentals of Controlling Refrigerant To Obtain Temperature Outlined for RSES

By Ed Kellie, President, Aminco Refrigeration Products Co.*

The control of refrigerant to obtain temperature is achieved either by simply controlling the liquid flow to the evaporator or by controlling the flow of the refrigerant gas as it leaves the evaporator in conjunction with control of liquid flow.

The control of the liquid flow to the evaporator may be achieved by several different methods which will be discussed individually. All boil down to a means of reducing the pressure of the refrigerant between the condensing unit and the evaporator and thus permitting expansion of the refrigerant to reduce the temperature of the evaporator.

The earliest form of flow control was simply a fixed orifice through which the liquid refrigerant flowed to the evaporator. The effect was purely a matter of pressure drop. The size of the orifice and its length governed the amount of this pressure drop which, of course, was a fixed amount and consequently any variation in high side pressure resulted in a corresponding variation in low side pressure. Therefore, uniform evaporator temperature was impossible.

The next step in the evolution of liquid flow control was a hand operated needle valve which could be adjusted to increase or decrease the pressure drop.

This valve which became known as the "Manual Expansion Valve" was a little more flexible than the fixed orifice but obviously it was still impossible to maintain constant uniform evaporator temperature.

Later a device appeared which utilized a male and female thread to obtain pressure drop. This gave in effect a small spiral orifice which could be adjusted to increase or decrease the pressure drop by changing the amount of engagement of the threads. This, too, simply gave a relatively fixed pressure drop and evaporator temperatures varied as in the other fixed orifice types.

Later, automatic controls appeared with the development of the automatic and thermostatic expansion valves and lowside floats and high side floats.

With these began a new phase in liquid flow control for then we began to control the *amount* of refrigerant passing into the evaporator.

Automatic Valve Operation

In an automatic expansion valve any movement of the bellows or diaphragm moves the needle back or forth in relation to the seat which controls the amount of liquid which can pass through the orifice.

In operation, as the unit starts up, the valve is in the closed position until any residue of refrigerant in the evaporator has been evaporated and drawn off through the suction line and the evaporator pressure is reduced to the setting pressure of the valve.

The bellows deflects and moves the needle away from the seat permitting liquid refrigerant to flow into the evaporator. As this liquid boils off it tends to raise the pressure in the evaporator. It does so as soon as there is more gas being formed than can be drawn off by the compressor, at which point the bellows deflects due to pressure increase and closes off the needle to some extent, thereby reducing the amount of liquid passing through the valve.

It becomes apparent that the pressure drop through the expansion valve varies as the needle is moved by the deflection of the bellows. Also, the amount of liquid passing through is likewise varied.

Now, since the movement of the bellows or diaphragm is governed by the evaporator pressure and since the amount of refrigerant in the evaporator governs the pressure, we see that actually the control of liquid flow into the evaporator is entirely dependent on the conditions in the evaporator.

Obviously, variations in high side pressure due to ambient temperatures do not affect the control of the amount of liquid passed into the evaporator. There is, however, some element of time required to actuate the valve; during this time refrigerant continues to flow at its previous rate, and the refrigerant does not completely evaporate and so a saturated gas can pass into the suction line. Further, expansion takes place in the suction line and a frost-back occurs.

The thermostatic valve is similar in operation to the automatic valve except that it has a refrigerant-charged power element and bulb which actuates the bellows or diaphragm. The bulb is placed on the evaporator or the suction line at a point at which all of the refrigerant should be completely evaporated. That is, at the point where the gas has been sufficiently superheated to prevent further expansion at suction line pressures.

In operation, the pressures within the evaporator combined with the force exerted by the thermal bulb control the amount of refrigerant passing through the valve. If saturated gas flows toward the point at which the bulb is located, the rapid chilling which occurs promptly closes the valve and thus prevents frost-back.

Superheating of the gases is not instantaneous but rather is progressive in occurrence, so we find that toward the suction end of the evaporator there is a gradual decrease in the refrigerating effect and a consequent variation in temperature. The time lag required to actuate the valve will add to this condition by varying the location of the point where superheat begins to occur.

This is more noticeable on low temperature applications. On low temperature applications, we sometimes find that after reaching about -30° the capacity of the expansion valve seems to drop off.

The explanation for this seems to be that at around the -30° evaporator temperature the suction pressure on "Freon-12" is low enough to cause some evaporation to occur in the seat orifice which appears to restrict the flow through this point due to the lowering of the density of the refrigerant.

How Low Side Floats Work

Low side floats consist of a float and needle and seat mechanism contained within the evaporator. The position of the needle is governed by the amount of liquid within the evaporator. Any change in this liquid level either opens or closes off the orifice and so we see that this mechanism actually controls the amount of refrigerant flowing into the evaporator dependent upon conditions within the evaporator.

This type of control is satisfactory on SO_2 applications because the oil which goes over with the refrigerant floats on top of it.

With "Freon-12" and methyl chloride, however, the oil mixes with the liquid refrigerant and since the concentration of oil will vary with external conditions, it can be seen that since this changes the specific gravity of the mixture there will be wide variation in evaporator temperature.

High side floats control the liquid flow into the evaporator to maintain a full flooded condition. The liquid flows from the high side float through the liquid line to the evaporator.

A restrictor, either a loaded check valve or a short length of ⅛ in.

(Concluded on next page)

*Presented at the ninth annual educational conference of the Interprovincial Association, Refrigeration Service Engineers Society, Toronto, Ontario.

Only

THERMOBANK
by KRAMER

Keeps Coils Frost-Free Automatically at Any Temperature without..
LABOR
ATTENTION
ELECTRIC HEATERS
BRINE OR WATER SPRAYS

• Write for Bulletin R-124

KRAMER TRENTON CO. Trenton, N.J.

MULTI-COLD
Condensing Units

"THE FRIGID MIDGET"
A "Hot" Number For Producing "Cold"
Ask Your Wholesaler
Other Models Available
¼ HP Single and ¼ - ⅓ - ½ & ¾ Twins

MULTIPLEX MFG. CO. BERWICK, PA.

How Capillary Acts as Control Explained

(Concluded from preceding page)

tubing, is inserted between the liquid line and the evaporator in order that a column of liquid is maintained back to the orifice of the high side float; this prevents sweating or frosting of the liquid line.

An accumulator is installed between the evaporator and the suction line. This should be at or slightly above the highest point of the evaporator to be sure that the evaporator is always flooded. It should also be so located that it will be at the same temperature as the evaporator.

The accumulator provides a boiler space and also acts as a reservoir. It does not matter if the accumulator is ¼ full or ¾ full, so the amount of charge is not at all critical.

The unit is charged either by puting in a weighed amount or simply by charging from a liquid drum at the discharge valve of the compressor while the unit is running. Charging is continued until the suction line feels cold to the hand at which point sufficient refrigerant has been charged in. A slight purging may then be necessary to permit suction pressure to pull down to cut-off temperature.

Use of High Side Float

In operation, the high side float is caused to open as gas boils off and is condensed at the compressor and returned as liquid to the high side float. The faster the gas boils off the faster it is returned to the evaporator by way of the high side float. As the evaporator temperature is reduced and gas is formed more slowly the liquid level in the high side float is reduced and so it begins to throttle down.

So we see that with this type of flow control we are again regulating the flow of refrigerant dependent on conditions existing in the evaporator and external conditions such as ambient temperature changes do not affect the flow control. This type of control is now proving quite satisfactory on low temperature work.

There is one other device for controlling flow of refrigerant into the evaporator, that is, the capillary tube.

This has found considerable favor with manufacturers of packaged units using hermetic compressors. Capillary tubing is comparatively cheap. However, on the overall cost the complete installation is comparable in cost to those using either expansion valves or high side floats.

Capillary tubing has several disadvantages but its chief advantage lies in the fact that during the off cycle the highside and lowside pressures tend to equalize.

This is necessary on hermetic units because unless the highside pressure is reduced sufficiently the unit will not start up and trouble results. The use of an equallizer valve at the compressor will overcome this trouble but this, of course, adds considerably to the overall cost.

Hermetics Use Capillary

It is for this reason, chiefly, that capillary tube is almost universally used in connection with hermetics. However, a high side float with a slotted needle has proved successful and is being used by some manufacturers at the present time.

Now, about the capillary tube as a flow control device. Its action is entirely different from any of those previously mentioned. The end result is a difference in pressure between the high side and the low side. The length and size of the tubing directly effect this, and, of course, the proper length is important.

However, the effect of the capillary tube is not just pressure drop due to the length of flow through a piece of tubing, nor is the pressure drop constant throughout all conditions. There seems to be a pulsating action in the passage of liquid through the capillary tube.

How Refrigerant Is Lifted by Capillary

This may be in part due to the fact that there is an expansion or flashing of gas as the liquid enters the evaporator and this may cause a rapid lowering of pressure for short distance back down the capillary. This tends to lift another short column of liquid next adjacent to this back down the tube. This in turn may cause another short low pressure column in which there is some expansion or flashing of gas and so on down the line.

The heat required for the flashing of the gas would be drawn from the walls of the capillary tube for it must be remembered that relative to the column of liquid within the tubing there is quite a mass of copper in the wall.

This pulsating or pumping action indicates that there *is* some refrigerating effect within the capillary tube, and this has been borne out by experiment by R. Swart and also Hugh Scullen. It seems that this effect in capillaries plays a part in the control of the liquid flow to the evaporator.

Now ambient temperatures seem to have more effect on capillary tubing than on any of the other metering devices. When the ambient temperature gets down below 40° capillaries cease to function or become very erratic, and among the things which occur to cause this are lowering of the high side pressure which reduces pressure differential.

Lower ambient may reduce the heat pick-up by the walls of the capillary and may tend to decrease the lift on the liquid column due to the pulsating effect described earlier. The result is that sufficient refrigerant does not get into the evaporator and refrigerant is pumped over to the high side.

Home Freezer Problem

The conditions outlined, that is, 40° ambient or lower, are most frequently encountered with home and farm freezer which are operated in unheated utility rooms.

Now, at the other end we find that when ambient temperatures rise above 120° the efficiency on a capillary tube job begins to drop off. This may be to some extent due to too much refrigerating effect forming too much gas in the capillary, resulting in a lowering of the amount of liquid going over. Another thing that happens is that relatively large slugs of oil begin to go over into the evaporator.

It seems to me that what happens here is that the greater refrigerating effect within the capillary tube creates relatively large volumes of gas and that oil is thus distilled out from the liquid and collects into a slug to pass along the tube. At the evaporator end of the tube this oil leaves the tube without any expansion and thereby breaks up the pulsating effect, thus reducing the amount of "lift" on the liquid and so further reducing the amount of liquid going over.

Furthermore, the oil which goes over thus will coat the walls of the evaporator if a gas space exists or the wall of the gas space in the accumulator. This will still further reduce the efficiency of the installation due to the insulating effect of the oil reducing the rate of heat transfer.

This, of course, has not been a complete discussion on capillary tubes. That is impossible until more people have more exact information on exactly what does happen under the different conditions with capillary tubes as the metering device.

Efficiency Drops Off

I would say this, however, that in both low and high ambient temperature the efficiency drops off alarmingly in capillary tube jobs. Those of you who are servicemen are going to bump into these things in addition to plugging, ice troubles, etc. I think you might find a very leaky high side float a good replacement for a capillary tube on these jobs but be sure it does leak good or the unit will just hum without starting up.

Now, for the control of refrigerant flow by controlling the gases as they leave the evaporator. In this class we find constant pressure valves, temperature regulating valves, and snap action valves.

The constant pressure valve has a bellows-actuated needle which is moved to or from the seat orifice as the pressure within the evaporator decreases or increases. In this way, the amount of gas leaving the evaporator is varied as the pressure changes deflect the bellows.

These valves are set to operate at some desired pressure. They have a close differential and so when the evaporator pressure increases above the setting pressure, the valve opens wider to let more gas out; then as the pressure drops the valve closes down to let less gas out. Thus, the valve operates to maintain a constant pressure within the evaporator regardless of what the suction line pressure is.

It can, therefore, be seen that this valve may be used on multiple evaporator installations to maintain a higher pressure in one evaporator than exists in another. It may also be used in multiple applications on which all evaporators are of the same temperature but on which the loading on each evaporator may be different.

For example, on an installation in which a walk-in box and a display counter are operated with one compressor. The heat loss on the display counter would be much greater than in the walk-in and so the counter would require operation of the compressor more frequently than the walk-in.

Constant Pressure Valve Use

So, to avoid pulling down too cold on the evaporator in the walk-in, a constant pressure valve would be installed on that evaporator so that it would operate to maintain a constant pressure and would close off if the unit were running and started to pull the pressure down in this evaporator.

One thing to be remembered, the constant pressure valve should only be used on evaporators where the whole unit may be shut down for defrosting or where defrosting is not necessary.

Temperature Regulating Valve Function

The temperature regulating valve is similar to the constant pressure valve in construction and operation except that it has a gas-filled power element and the valve is actuated by this in response to temperature changes instead of pressure changes.

Snap-action valves have a pressure-operated bellows mechanism which operates a needle in such a manner that the valve is either wide open or tightly closed. It also has a wide differential which may be adjusted to achieve the condition required and there is also a range adjustment.

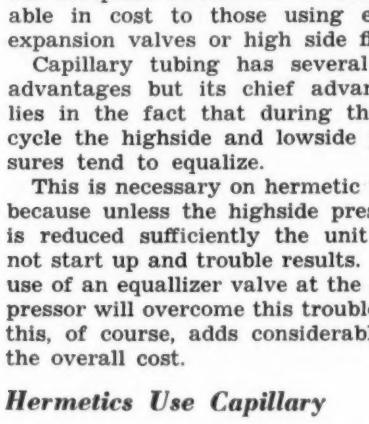
In operation, this valve closes off when the pressure in the evaporator has pulled down to the required pressure which is usually equivalent to a temperature below the frosting point. The valve then remains closed until the opening pressure is reached which is usually above the defrosting temperature.

In this way, a defrosting cycle occurs on every operation of the valve. This is essential on multiple systems on which one or more evaporators must operate continually and therefore the unit cannot be shut down for defrosting of the other evaporators.

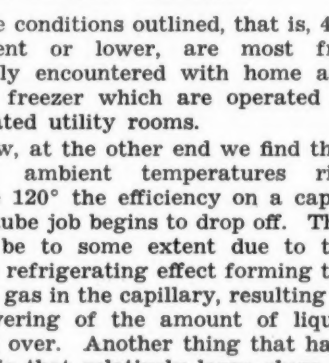
In addition to this, however, the snap-action valve is used in connection with blower coils where a wet coil is necessary and yet on which a lower average temperature than wet coil temperature must be obtained.

In connection with these suction gas flow control valves, it is, of course, necessary to install one of the liquid metering devices at the inlet of the evaporator.

SOME TERRITORY NOW AVAILABLE



Walk-ins that grow with the merchant's business



Reach-ins with coiling that is different

A Dry Beverage cooler with quicker cooling

THESCO

THE C. SCHMIDT CO.
CINCINNATI FOURTEEN OHIO

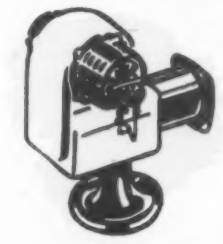
QUIET at ANY BURNING RATE with TORRINGTON VAIRIFIED* AIR IMPELLERS

Adjusted for a burning rate of 2 to 3 gallons per hour, an oil burner gave excellent performance in every respect. But when set for a lower consumption, noise became a problem.

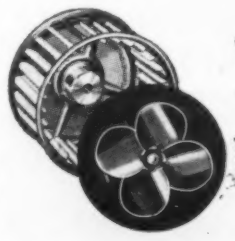
Study by Torrington's air impelling engineers disclosed that by using a smaller size Airotor blower wheel for the lower burning rates, the noise problem was eliminated. With slight, inexpensive housing modifications, the use of Airotor wheels in two sizes was entirely practical.

Why not benefit from the advantages of Torrington Air Impellers and our years of research experience? We can help you most when your product is *in the early stages of design.*

Sales engineers in all principal cities.



*Vairified . . . aerodynamically designed for maximum operating efficiency with quietness; guaranteed to perform as rated under NAFM or NEMA Codes; individually gauged for alignment; dynagraphically balanced. The Torrington Manufacturing Co.



THE TORRINGTON
MANUFACTURING COMPANY, TORRINGTON, CONNECTICUT

One of a series from

The KEY to AIR CONDITIONING

by James J. LaSalvia

Sheet Metal Ducts (Cont.)

FACTORS USED FOR DUCT DESIGN

In designing a duct system certain factors must be adhered to for good practice:

1. Friction or resistance loss per 100 lineal feet of duct.

a. For general practice use .1 in. of water gauge per 100 ft.

b. For quiet operation use as low as .05 in. water gauge per 100 ft. in such installations as residences, churches, and radio stations.

c. For industrial work where noise is not a major consideration use from .1 to .15 in. water gauge, depending upon conditions.

2. Smallest height or width of duct.

a. The smallest height or width of any part of the duct system should be not less than 4 in.

b. For residences the smallest height or width of duct may be 3¾ in. to fit between the wall studs.

3. Sizes of grilles or registers.

a. The sizes of supply grilles or registers should be at a ratio of at least 2 to 1, in regards to width and height, and may go as high as 5 or 6 to 1. This was described more fully in the section on Air Distribution.

b. Recirculation grilles may be of any ratio.

4. Miscellaneous.

a. Keep design of duct as simple as possible, avoiding all unnecessary turns.

b. Keep any pipe or other obstruction from going through the ducts.

DUCT DESIGN BY THE EQUAL FRICTION METHOD

For illustration let us go through the procedure of designing the duct layout as shown in Figs. 7 and 7a.

Grille sizes are determined as outlined in the grille section of the series on Air Distribution.

Resistance pressure for the system is determined under resistance pressure section at end of this chapter.

When designing a large duct system, it is necessary to make a form as shown by Chart 1 for your records, and it is also easier to make changes any time later, when necessary.

The following procedure is required:

1. Place number of outlet in first column.

2. Place c.f.m. for each corresponding outlet in third column.

3. Place c.f.m. for sub-branches in fourth column.

4. Place c.f.m. for main branches in fifth column.

5. Place size of grilles as selected in second column.

6. Place velocities corresponding to each c.f.m. selected from Fig. 6 and using basic resistance pressure, which in this case is .1, in sixth column.

7. At the same time velocities are taken off from Fig. 6, the round size duct can be taken off. This should be placed in column 7.

8. Refer the size of the round duct in each case to Table 1, for corresponding size of rectangular duct, which should be placed in column 8.

9. It is best to start with the farthest outlet on the farthest branch from the fan and take in each outlet separately until that branch is sized. Then start with the farthest outlet on the next farthest branch until that branch is sized. Combine these two branches into a common branch until the next branch is encountered.

Size the third branch in the same manner as the first two branches, and then combine this branch to the common branch formed by the first two branches into a common branch.

Duct Layout Which Has Been Sized by the Equal Friction Method

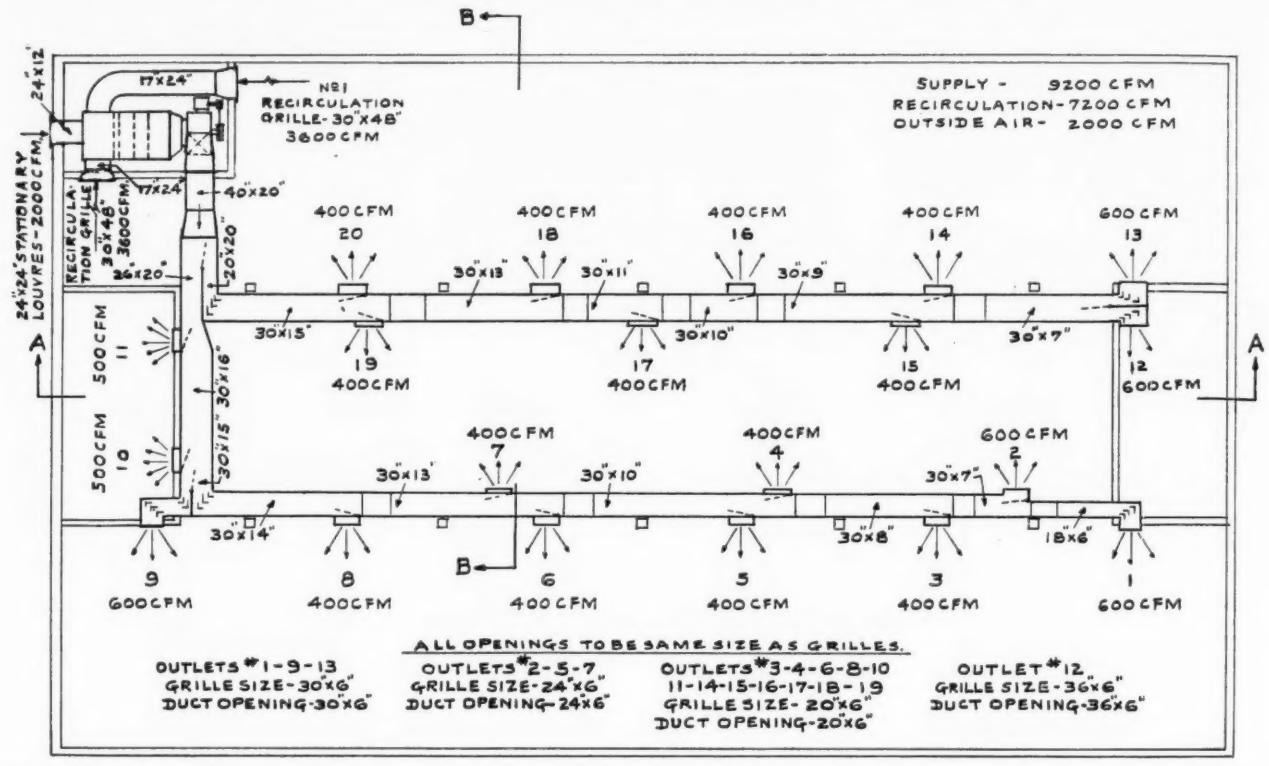
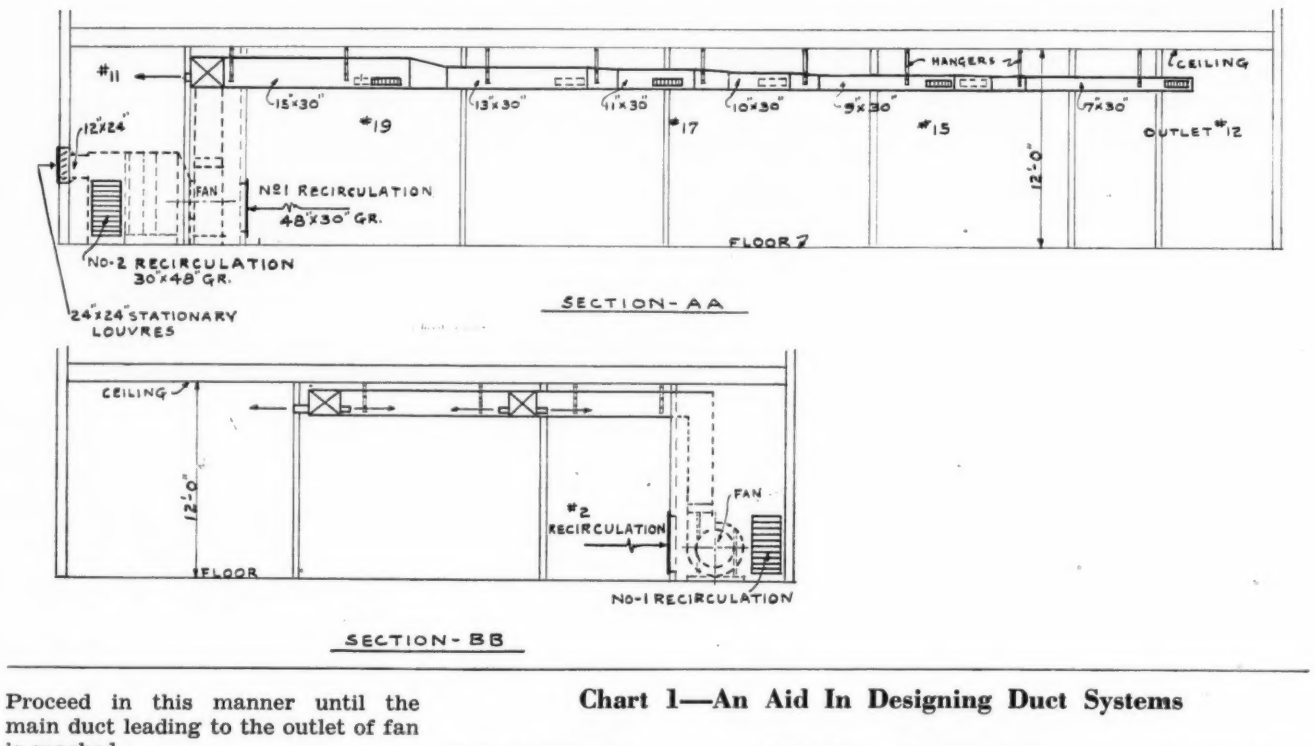


Fig. 7 (above) and Fig. 7a (below) show how a typical large system of air conditioning ductwork has been sized by using the equal friction method. Details of the sizing method are explained in the accompanying text.



Proceed in this manner until the main duct leading to the outlet of fan is reached.

Commenting on the layout as shown in Figs. 7 and 7a, the branches A and B running down the full length of the space, were held at 30 in. wide, and the height was varied. This gives good appearance in the space.

Note that all supply grilles were made 6 in. high and are located near bottom of ducts and at the same level. This is also conducive to good appearance.

These ducts could be enclosed by metal lath and plaster to make them appear as false beams. This would give a very good appearance to the whole space.

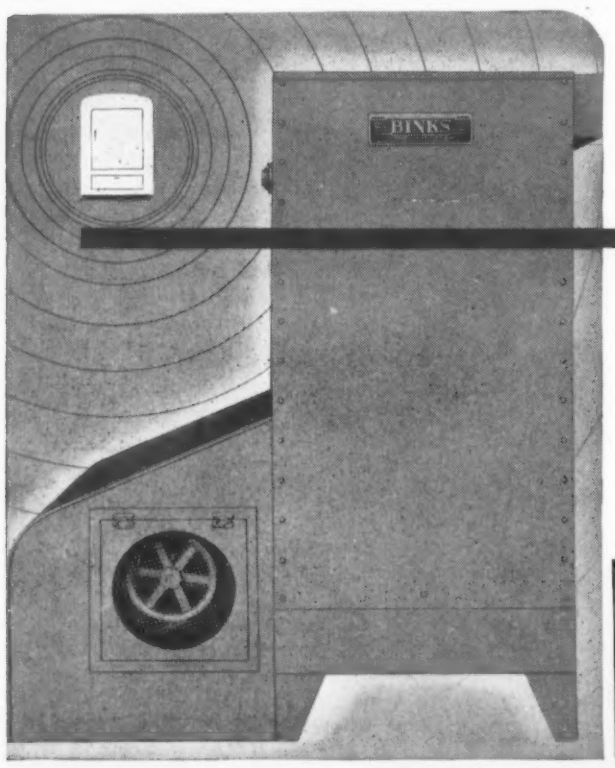
(To Be Continued)

Chart 1—An Aid In Designing Duct Systems

Total Air Supply ..... 9,200 c.f.m. — **Type of Job** .....General Office
Outside Air ..... 2,000 c.f.m. — **Basic Resistance Pressure** .1 per 100 ft.
Recirculated Air ..... 7,200 c.f.m. — **Space:** 108 ft. long, 60 ft. wide, and 12 ft. high

Outlet No.	Grille Size	Outlet c.f.m.	Sub Branch c.f.m.	Main Branch c.f.m.	Velocity f.p.m.	Round Duct Dia.	Equivalent Rectangular Duct
1	30 x 6	600	600	....	850	12	18 x 6
2	24 x 6	600	1,200	....	1,000	15	30 x 7
3	20 x 6	400	1,600	....	1,100	16	30 x 8
4	20 x 6	400	....	....	....	..	.....
5	24 x 6	400	2,400	....	1,200	19	30 x 10
6	20 x 6	400	....	....	....	..	.....
7	24 x 6	400	3,200	....	1,300	21	30 x 13
8	20 x 6	400	3,600	....	1,350	22	30 x 14
9	30 x 6	600	4,200	....	1,400	23	30 x 15
10	20 x 6	500	4,700	....	1,450	24	30 x 16
11	20 x 6	500	....	....	....	..	.....
			Branch "A"	5,200	1,475	25.3	26 x 20
12	36 x 6	600	....	....	....	..	.....
13	30 x 6	600	1,200	....	1,000	15	30 x 7
14	20 x 6	400	....	....	....	..	.....
15	20 x 6	400	....	....	1,150	..	.....
16	20 x 6	400	2,400	....	1,200	19	30 x 10
17	20 x 6	400	2,800	....	1,250	..	.....
18	20 x 6	400	3,200	....	1,300	..	.....
19	20 x 6	400	....	....	....	..	.....
20	20 x 6	400	....	....	....	..	.....
			Branch "B" =	4,000	1,400	23.0	20 x 20
			Branch "A" =	5,200			
			Branch "B" =	4,000			
			Main Trunk Duct =	9,200	1,700	32	40 x 20
			Recirculating Duct				
1	48 x 30	3,600	3,600	....	1,350	22	24 x 17
2	48 x 30	3,600	3,600	....	1,350	22	24 x 17
			Outside Air Duct				
..	Stationary Louvers 24 x 24	2,000	2,000	....	1,150	18	24 x 12

MODEL J SHELL AND TUBE CONDENSERS
Low cost, easy-to-clean, sturdily built for long life—½ ton to 25 tons.
SHELL AND COIL CONDENSERS
Compact, inexpensive, efficient. Steel shell, copper coils. ½ H. P. to 5 H. P.
ACME PRODUCTS
These condensers are for both FREON and Methyl-Chloride and are Underwriters Laboratory Approved.
Your Jobber can supply you—or write direct
Continuously serving THE REFRIGERATION INDUSTRY Since 1919
ACME INDUSTRIES, INC.
JACKSON, MICHIGAN



This forced draft cooling tower is as QUIET as your electric refrigerator

● Here is a highly efficient cooling tower that can be operated indoors or outdoors without noise. Binks Type B Forced Draft Cooling Towers are as quiet as a good domestic oil burner or electric refrigerator. This is accomplished by using a slow speed blower assembly in place of the usual high speed propeller type fans. The type B tower greatly increases the air to water ratio without increasing power consumption. The result is higher efficiency and less wear. Excellent for use with small and medium capacity water cooled refrigeration and air conditioning compressors. Also well suited to other water cooling jobs requiring a capacity up to 60 G.P.M. or 20 tons of refrigeration.

SEND NOW FOR BULLETIN 700

which supplies data, tables, charts, etc. to help you determine the right size Type B cooling tower for your use.

THERE'S A BINKS COOLING TOWER FOR EVERY WATER COOLING JOB

BINKS TYPE B — Binks — 20 STANDARD SIZES

Binks MANUFACTURING COMPANY
3114-40 CARROLL AVE., CHICAGO 12, ILLINOIS
OFFICES IN ALL PRINCIPAL CITIES

REFRIGERATION AIR CONDITIONING HEATING PARTS and SUPPLIES

SERVICE THAT'S UNSURPASSED
from the
SUPPLY HOUSE THAT SERVICE BUILT

Dependable efficient same-day filling of orders has built our business ... our reputation. Keep your stocks complete this easy, speedy way ... just order from our FREE catalog. Saves you time ... energy ... money. Prices right. Wholesale only.

SERVICE SP PARTS CO.
2511 LAKE STREET — MELROSE PARK, ILL.

New Clock Thermostat Regulates Heat In Home

CHICAGO — A "plug-in" clock thermostat that can be installed by a homeowner in less than five minutes has been announced by the Minneapolis-Honeywell Regulator Co.

Unveiled at the 25th annual Oil Heat Institute Exposition here, the instrument is the first of its kind designed to replace manual thermostats, said Thomas McDonald, vice president in charge of sales for the company. It can be applied to virtually all types of automatic heating plants.

Containing an electric clock which will automatically lower house temperature at night and raise it again in the morning, the thermostat is a modification of Honeywell's Chronotherm but uses a 110-volt clock motor instead of the 24-volt motor, he said.

"Development of the home-installed device will break a bottleneck that has been plaguing the heating industry since the beginning of the war," McDonald said. "Public demand for clock thermostats, particularly in the past year, has been more than double the capacity of the heating industry to install them.

"With this new thermostat, the homeowner need only to pick up the instrument from his heating dealer, and take it home and have it working in less than five minutes. The dealer will not have to have one of his staff go to a home, install a transformer and pull wires from the cellar to the thermostat location."

Production of the new device already is underway. It will be distributed through normal trade channels and extensively promoted through consumer advertising mediums, he said.

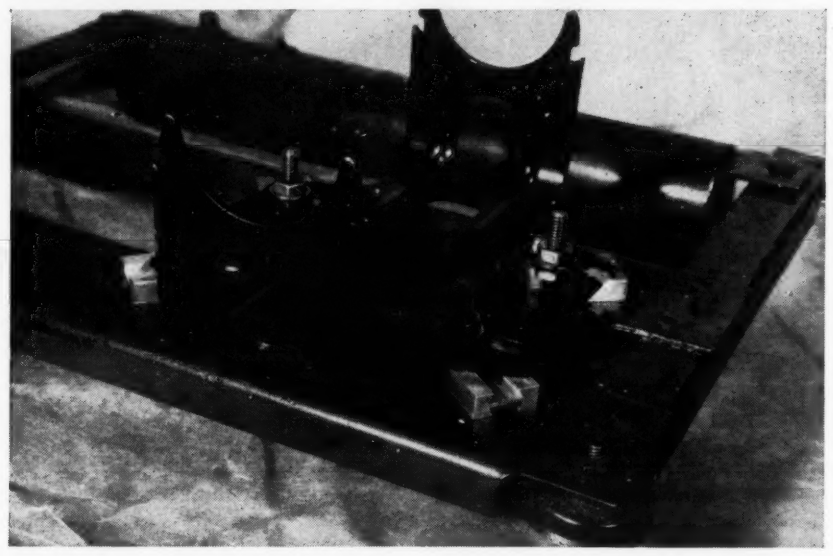
The plug-in Chronotherm will come equipped with a universal wall plate that automatically will make electrical connections with existing thermostat wires. Simple directions packed with the instrument will show homeowners how to remove their present thermostat, mount the Chronotherm, and plug it into the nearest electrical outlet.

Universal design of the wall plate, McDonald said, makes installation of the new Chronotherm applicable to almost all types of existing thermostat mountings.

Stockham Starts Glendale Firm

GLENDALE, Calif.—Stockham Air Conditioning Co. is the firm name under which Paul Stockham has published a certificate that he is conducting business at 340 West Colorado Blvd., Glendale.

Motor Adapter Plates Simplify Motor Mounting By Avoiding Need for Close Line-up of Holes



Inverted V slots in top and bottom of these new motor adapter plates permit a motor to be moved in any direction within rather wide limits, thus simplifying the problem of matching motor mounting holes or slots with those of the base, as indicated in this photo of a stripped motor mount and unit base.

* * *

DETROIT — Motor adapter plates which will permit a motor to be mounted readily on a condensing unit base regardless of whether the mounting holes in both motor and base line up will shortly be introduced by the newly formed Motor Adapter Corp. here.

The plates were developed by John J. Grenat and Joseph J. Stadler, veteran refrigeration contractors who are principals in the new firm.

Each plate, there being four to a set, will be extruded from aluminum or brass and measure 7/16 in. thick, 1 in. wide, by 2 in. long. Running full length of the plate on both top and bottom is an inverted V slot measuring 3/8 in wide at the plate surface and 1/2 in. wide at the bottom.

In these slots slide square head 5/16-in. machine screws which have the head specially tapered on two sides to make a snug fit with the plates when tightened up.

To use the plates, the set of four is bolted to the condensing unit base, and then the motor is bolted on the plates, the slots providing considerable adjustment in any direction.

Adapting replacement motors to condensing unit bases is often quite a problem, especially if exact replacement motors aren't available, the company points out. With the adapters it isn't necessary to drill new holes in the base to accommodate a non-fitting motor.

The plates may also be useful in shifting the motor slightly to use a belt of different length, which may have to be done if the serviceman doesn't have and can't obtain the correct length belt, it is claimed. The replacement motor can likewise be moved sideways to adjust for different lengths of rotor shafts.

Initial production will include sets of adapters for 1/8 to 1/3-hp. motors, inclusive, but future plans call for larger commercial size plates as well as bar stock which could be cut to length by the user for such applications as hanging coils.

Smokeless, Coal Burning Warm Air Furnace Gets Field Test In Columbus

PITTSBURGH — A coal-burning warm air furnace that can burn any kind of coal smokelessly has been placed on field trial in Columbus, Ohio, it has been announced by the developers, Bituminous Coal Research, Inc.

The furnace has been in regular home operation since Jan. 28. A duplicate model is in operation in the laboratory of Battelle Memorial Institute.

The furnace is one of a group of residential heating units which have been developed for the coal industry to meet the requirements of municipal smoke abatement ordinances throughout the country.

The furnace now under test at Columbus follows in principle another space heating unit, the BCR smokeless heater. This heater has been approved by smoke control authorities and is now being sold commercially.

Throughout the program of developing smokeless coal-burning equipment, Bituminous Coal Research, Inc., the national research agency of the bituminous coal industry, requires that the completed unit be able to burn any kind of bituminous coal smokelessly. Only when this capacity has been developed and adequately tested has a unit been announced.

The furnace burns coal smokelessly because it operates on the fundamental principle of smoke abatement: to prevent smoke from being formed when the coal is burned, rather than to attempt to burn the smoke after it has been formed. Air for combustion is admitted to the fire at three strategic stages.

With the furnace operating under weather conditions down to zero degrees, a close watch has been kept on drafts and stack temperatures. The responsiveness to fluctuating demands for heat while operating under thermostat control, is indicated by variations of only plus and minus 2° F. from the thermostat setting during 24 hours operation.

Refueling has been necessary only once in 12 hours under the most severe weather conditions. The furnace needs attention only once every 24 hours in mild weather. These furnaces are not yet in production.

Just plug in - and use "Character" THE WORLD'S SMARTEST

Self-Contained Florist Display Refrigerators

- United
- Stainless Steel Front
- Large, Display Glass Sliding Doors
- Fluorescent Lighting
- Genuine Cemetric Tile Floor
- Black Panelyte and Stainless Steel Trim
- Stepped-Up Display Stands

No. 630 Junior S/C
Size 72" x 34" x 86"

Write or call for our latest literature

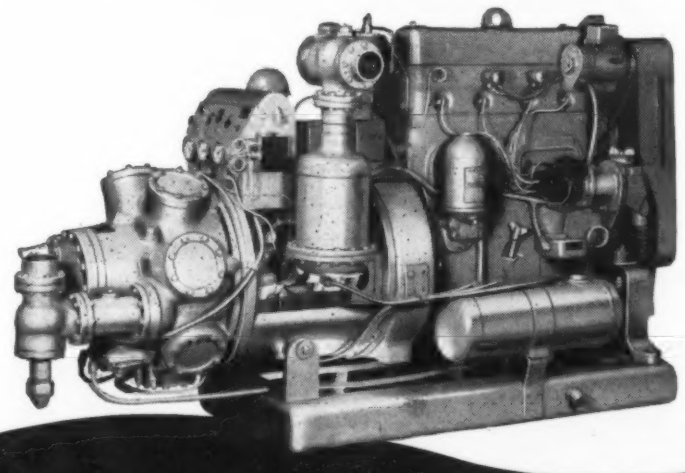
"Character" REFRIGERATORS Corp.
Formerly A. & S. Refrigerator Co.
645 BROADWAY — NEW YORK 12, N. Y.
Tel: GRamercy 7-3590

Lowest Cost Air Conditioning!

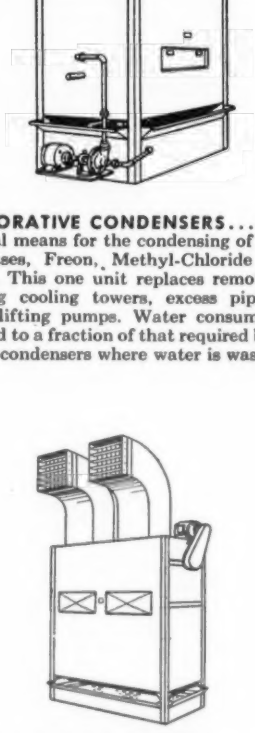
WITH NATURAL GAS, BUTANE, GASOLINE OR DIESEL POWERED

READY-POWER ENGINED REFRIGERATION

Here is dependable, automatic air conditioning at the lowest possible cost! These units are powered by International engines and operate on fuels that are inexpensive and plentiful. Ideal for situations where power is inadequate. Write The Ready-Power Co.



THE READY-POWER CO. 11233 FREUD AVE., DETROIT 14, MICH.



AIR-CONDITIONERS . . . Governair Air Handling Units are especially designed to meet the requirements for process work or comfort. Compact and quiet, they can be completely equipped for year-round air-conditioning. Wide range of sizes in both horizontal and vertical types.

EVAPORATIVE CONDENSERS... An economical means for the condensing of refrigerant gases, Freon, Methyl-Chloride or ammonia. This one unit replaces remote water wasting cooling towers, excess piping and water lifting pumps. Water consumption is reduced to a fraction of that required by water cooled condensers where water is wasted.

FLOOR TYPE UNIT COOLERS... Designed for use in cold storage rooms to produce any temperature required. Water defrosting apparatus may be furnished for units used in rooms with temperatures below 33 degrees. Air ducts and diffusers shown are furnished on special order.

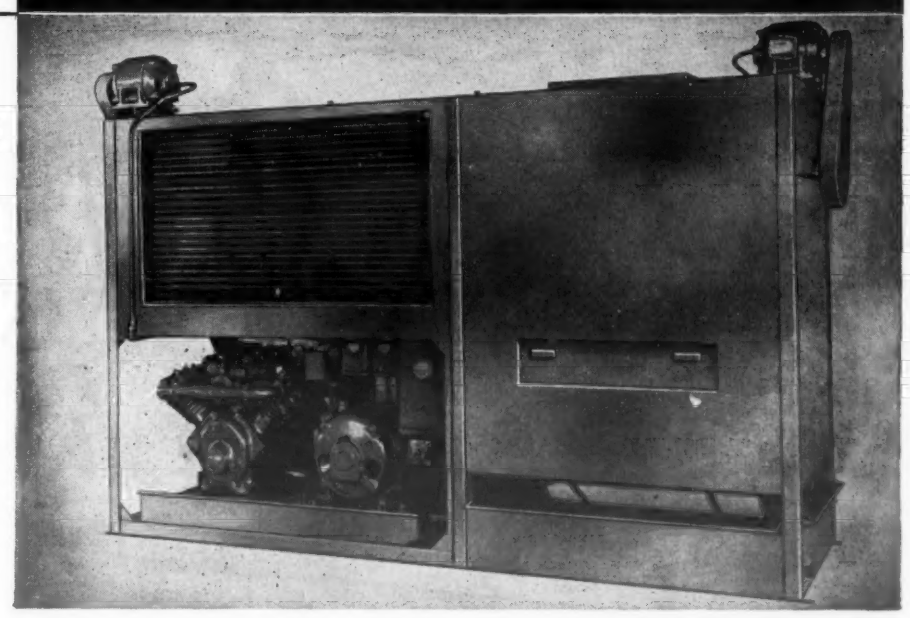
BLAST COILS FOR HEATING AND COOLING ... Made of copper tubes and copper fins spaced according to temperatures involved. All joints are securely welded into suction headers on the return side and fed counter-flow from the expansion valves. This assures a tight system with minimum loss of refrigerant. Thorough pressure test made at factory.

Again it's

GOVERNAIR

completely packaged air-conditioner with evaporative condenser

(U. S. Patent No. 2,297,928)



- Ready to operate
- Make only simple electrical, water and duct connections
- Wide range of sizes (3 tons to 50 tons)
- Rapid delivery

Here is the *only* really complete packaged air-conditioner on the market offering compact, efficient operation, easy installation and high quality performance. Its outstanding feature, of course, is the built-in Evaporative Condenser which reduces water consumption and cuts water costs to a fraction. Higher cooling output per horsepower input is obtained by careful balance between the three component parts. Sound engineering, modern assembly and quantity production methods make Governair *the greatest value known* in modern air-conditioning equipment.

WRITE OR WIRE FOR DESCRIPTIVE LITERATURE AND PRICES

GOVERNAIR

GOVERNAIR CORPORATION—513 N. BLACKWELDER—OKLAHOMA CITY, OKLA.

PIONEERS IN THE MANUFACTURE OF COMPLETELY PACKAGED AIR-CONDITIONERS

Prevent Freezeups... Clogging..Corrosion!

DFN DEHYDRATORS

- Cartridge Type
- Angle Type
- Non-refillable type
- For Hermetic systems

See your jobber or write

McIntire Connector Co. Newark 5, N. J.

insist on genuine Marlo products

MARLO = HEAT TRANSFER Since 1925

REFRIGERATION MEN! Are You Prepared For AIR CONDITIONING?

Classes For Intensive Resident Course Are Now Forming

LATEST METHODS - MODERN SHOPS Approved for G. I. Training

Write today for full Details

Utilities Engineering Institute
2525 N. SHEFFIELD AVE., DEPT. Y-1, CHICAGO 14, ILL.

Becker Appointed Eastern Sales Head by Fedders

BUFFALO—Appointment of E. W. Becker as regional manager covering the eastern seaboard territory for the unit air conditioning division of the Fedders-Quigan Corp. here has been announced by E. A. Bonneville, sales manager.

E. W. Becker

Becker will maintain resident headquarters in Freeport, N. Y., according to Bonneville.

Plan $150,000 Storage In British Columbia

ABBOTSFORD, B. C., Canada — Working drawings of a new cold storage plant to be erected near Abbotsford, B. C. for Alpaspec Frozen Foods Co-operative are nearing completion in the Vancouver offices of R. R. McKee, architect.

Building and equipment will entail an expenditure of approximately $150,000.

An order for necessary equipment has already been placed with Canadian Ice Machine Co., Ltd., Vancouver.

The new plant will have 850-ton storage capacity for berries and vegetables and will be housed in a one-story frame buildng, 120 by 100 ft. with flat tar and gravel roof.

'Triple-Threat' Merchandising

Locker Plant, Hardware Store, Grocery Proves Successful Business Combination

By C. Dale Mericle

SAGINAW, Mich. — Locker plants have been operated in conjunction with food markets and gasoline stations, among other things, but there's one here that's added a comparatively new wrinkle—hardware.

It's a logical tie-in and it seems to be paying off.

The Harris Locker Plant, Inc., located about two miles northwest of the center of Saginaw, recently installed a small hardware department, in addition to the locker plant and the large self-service grocery which it also operates.

"We felt a hardware store was needed in this locality," explains Russell Harris, secretary and treasurer of the company, and one of the five Harris brothers, who with their father, a brother-in-law, and one or two cousins make this operation almost wholly a family affair.

FARMERS BUY HARDWARE

"Many of our locker patrons are farmers, and farmers are big users of hardware," he added. "When a farmer buys lag screws, for example, he usually buys several boxes, not just the two or three individual screws that the city dweller purchases."

The locker plant, the hardware department, and the large grocery section combine to make this operation a large shopping center for the locality. Even magazines and newspapers are handled by the firm.

Regular locker patrons are customers of the grocery and the hardware departments. People who come in for groceries have become interested in the locker service and availed themselves of the facilities. This has likewise applied to hardware customers.

620 LOCKERS INSTALLED

There are 620 lockers in the Harris plant, which occupies a building 75 ft. wide by 100 ft. deep. Half of this space is devoted to the grocery section, the rest being devoted to the locker room, chill and age rooms, cutting rooms, the wrapping department, and the small hardware section at the front of the building.

A large addition to the present building will probably be erected soon to house the hardware department separately, it was indicated. This will bring the plant investment up to about $75,000, Russell Harris said.

The locker room is cooled by two 5-hp. condensing units supplying a pair of McQuay Zeropak combination cooler and blast freezer units. Two more 3-hp. units handle the chill and age rooms and the other refrigeration needs of the plant. All four units are water cooled, using well water.

All the lockers are rented, and there is a waiting list of 30 would-be renters. Rentals run $12 and $14. Most of the patrons are farmers, but there are quite a number of city dwellers who likewise use the plant.

The whole operation stays open seven days a week for long hours as a convenience to patrons. On weekdays the hours are from 8 a.m. to 9 p.m., Sundays from 9 a.m. to 9 p.m.

In addition to giving the patrons of the locker plant the regular services, the company also offers them case lots of frozen foods. The only brand handled is the "Locker Pak" brand produced by the Hershey Packing Co. exclusively for locker plants.

TO SELL HOME FREEZERS

Home freezers have also been displayed and sold by the plant, but space is too limited now to promote them. As soon as the new building program is completed, Harris explained, freezers will again be on display.

Up to now Harris hasn't had to advertise its locker plant, but the firm is starting a weekly advertising schedule which will appear in the Saginaw daily paper every Thursday. This is intended to promote the grocery section, but adequate space in the advertisement will be devoted to the locker plant services which are also available.

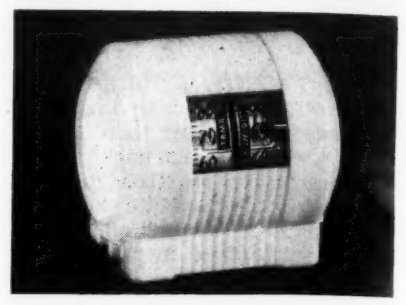
Besides Russell Harris, the other brothers who operate the plant, grocery, and hardware departments include Earl J. Harris, president; Chester, vice president; Elmer, and Gilbert. Earl D. Harris, father of the brothers, is also active in the company, along with Thomas Coe, a brother-in-law of one of the Harris boys.

Minneapolis Trucking Line Adds 7 'Reefers'

MINNEAPOLIS — The installation of refrigeration units in seven new aluminum 32-ft. trailers has allowed the Mercury Motor Freight lines of St. Paul to expand its refrigerated trucking service from the Twin Cities to Milwaukee and Chicago.

Hauler of dairy, meat products, and other perishables, the line purchased the units, model D, from the U. S. Thermo Control Co., manufacturer of gasoline-powered units.

Drum-Reading Recorder



Both temperatures and humidities may be read from figures on the drum.

* * *

New Instrument Shows The Comfort Zones

CHICAGO—The Middlebury-Carson Mfg. Co. here has recently developed an instrument, which it claims indicates temperature and relative humidity and the comfort zones where the two are in proper relation to each other.

Called the "Airgraph" Model A101, it requires no wires, cords, or other installation, but is ready for operation upon removal from the box.

Healthful conditions prevail when comfort zones, shown as black areas on the drum dial, assume positions opposite each other and are visible through the window. Readings, according to the manufacturer, are in black on the golden drum dial and may be seen across the room.

Dimensions of the instrument are given as height, 2½ in., width 2⅝ in., and depth 2⅜ in. List price of the Airgraph, which is housed in a Polystyrene plastic case, is $2.85, according to the manufacturer.

WILSON REFRIGERATION, INC.

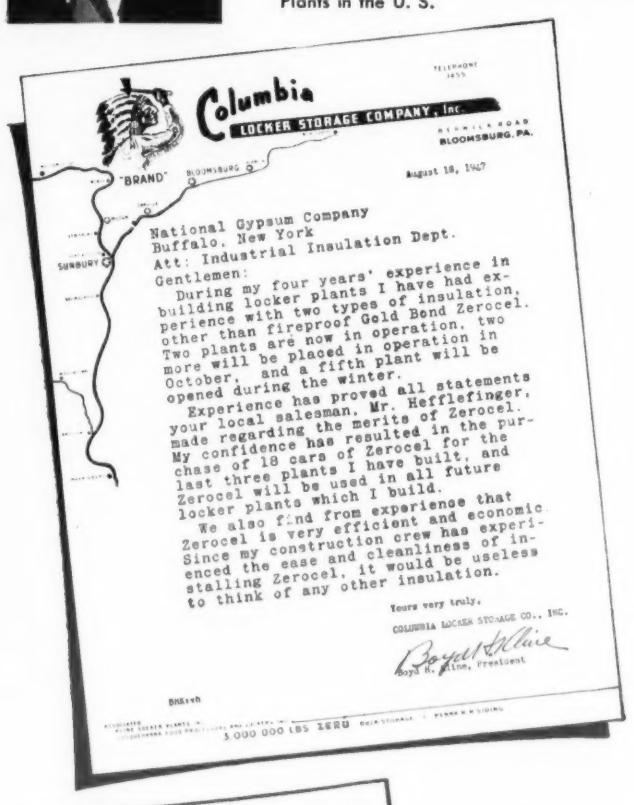
- FARM AND HOME FREEZERS
- REACH-IN REFRIGERATORS
- WALK-IN REFRIGERATORS
- FARM MILK COOLERS

DIVISION OF WILSON CABINET CO., INC. SMYRNA, DELAWARE

"It would be useless to think of any other Insulation"

says:

Boyd H. Kline, President of Columbia Locker Storage Co., Inc. One of the largest builders and operators of Locker Plants in the U. S.



Columbia LOCKER STORAGE COMPANY, Inc.
BLOOMSBURG, PA.

August 18, 1947

National Gypsum Company
Buffalo, New York
Att: Industrial Insulation Dept.
Gentlemen:

During my four years' experience in building locker plants I have had experience with two types of insulation, other than fireproof Gold Bond Zerocel. Two plants are now in operation, two more will be placed in operation in October, and a fifth plant will be opened during the winter.

Experience has proved all statements your local salesman, Mr. Hefflefinger, made regarding the merits of Zerocel. My confidence has resulted in the purchase of 18 cars of Zerocel for the last three plants I have built, and Zerocel will be used in all future locker plants which I build.

We also find from experience that Zerocel is very efficient and economic. Since my construction crew has experienced the ease and cleanliness of installing Zerocel, it would be useless to think of any other insulation.

Yours very truly,
COLUMBIA LOCKER STORAGE CO., INC.
Boyd H. Kline, President

- Efficient, "K" factor of 0.24 BTU at 60° F.
- Fireproof
- Will not absorb moisture
- Odorless
- Will not settle
- Immune to fungus, rot and decay
- Vermin-repellent
- Easy to cut with a knife

GOLD BOND ZEROCEL INSULATION

SEND FOR FREE BOOKLET TODAY

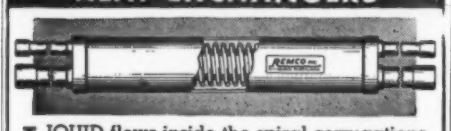
National Gypsum Company, Buffalo 2, N. Y.

Gentlemen: Please send me a FREE copy of the new Gold Bond Zerocel Booklet, "Fireproof Refrigeration Construction." A-4

Name .....
Company .....
Street .....
City ..... State .....

KRACK ENGINEERED
UNIT COOLERS
FIN COILS
AIR CONDITIONING
Refrigeration Appliances, Inc.
923 W. Lake St., Chicago 7, Ill.

REMCO "Liquid-Fin" HEAT EXCHANGERS



LIQUID flows inside the spiral corrugations in "prime" heat exchange relationship with the colder higher velocity suction gases which travel outside the rapid-transer "Liquid-Fin" heat exchanger element. Capacity per unit size is very high. No. 4

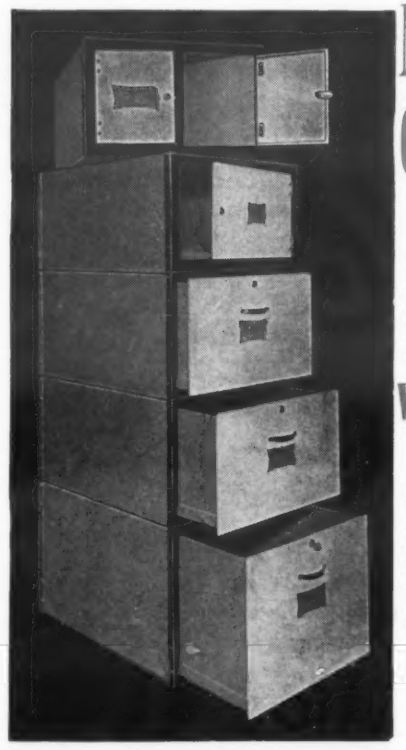
ASK YOUR WHOLESALER . . . OR WRITE
REMCO, INC., ZELIENOPLE, PA.

GET Those Extra Lockers NOW

Since 1935

IMMEDIATE DELIVERY

Locker rentals are on the increase due to low prices of meat—more meat is being stored because of a shortage prediction as well as higher prices later. So-o-o get your additional lockers NOW. Be sure you get the "Choice of the Industry" the



MASTER FOOD CONSERVATORS

They have everything for profitable locker operation. Equip for the future as well as the present. Get years of satisfactory service with MASTER.

WRITE, PHONE, WIRE

Advise if drawers are to be shipped assembled or knock-down. Also whether snap or barrel-type locks are preferred. Order at once while we have an adequate steel supply.

Endorsed by and sold through distributors of refrigeration and insulation.

MASTER MANUFACTURING CORP.
121 MAIN STREET SIOUX CITY 4, IOWA, U.S.A.

Member of Frozen Food Locker Institute organized for your protection.

Over 1,000,000 Master Food Conservators in Use

Utilities Plan Big Drive on Kitchens--

(Concluded from Page 1, Column 4)

to include electric laundries and other phases of electrical living."

Geared to supplement the electrical manufacturer's national brand advertising, the program is designed to be sufficiently flexible to permit every utility to use the materials and suggestions in developing a "tailor-made" plan to fit its own merchandising situation and local conditions.

Its immediate goal is consumer education, to bring to the American family knowledge of the many advantages of electrical living, and to encourage more homes to go all-electric.

Spearhead of the program will be a 40-page book entitled the "Kitchenizer's Digest," which is intended to be the most authoritative and complete book ever prepared on the all-electric kitchen.

"Kitchenizing" was coined, it was said, to describe the process of planning and purchasing an all-electric kitchen, complete with adequate wiring, the three major kitchen work centers, and smaller appliances.

The nation's leading authorities on appliances and kitchen planning will contribute to the digest, with informative articles on all phases of electric kitchen planning, it was said.

Profusely illustrated, with many full-color pages, the "Kitchenizer's Digest" will present helpful advice and suggestions of women's magazine editors, outstanding home economists, and others whose names are known to every American homemaker. It is expected to prove the most effective method yet devised to bring the electric kitchen story to the utility's residential customers.

Supplementing the digest, which will be distributed by the utilities, will be an extensive array of newspaper advertisements, one series of which will feature the "Kitchenizer's Digest" and will tell readers how it can be obtained. Another series will present the benefits of the all-electric kitchen to every member of the family.

Other promotional and educational aids tentatively listed for this program are radio shows, to include 15-minute transcribed shows and a group of spot announcements; 24-sheet outdoor advertising posters; car cards, floor and window displays, bill enclosures, truck posters, and plans for model kitchens for display purposes.

Kitchen planning kits will also be provided, with all materials needed to design and make miniature kitchens in cardboard. These, it is suggested, can be distributed among various customer groups. A full color motion picture on kitchen planning is also being considered by the committee.

The program proper will be introduced to the industry's sales executives in a program plan book, with sample materials, the background of the program, and suggestions for its most effective use. The plan book will be ready soon.

Explaining the thinking of the committee which was behind the new kitchen program, T. O. McQuiston of the Duquesne Light Co. emphasized:

"What we need is a good old-fashioned revival on a national scale that will sell America not only merchandise but the acceptance of a method of living. We need to sell this idea completely; not only as an idea in itself but to the exclusion of any other method of living."

Also participating in the presentation of this program were H. H. Brenan of the Pennsylvania Power & Light Co. and Harry E. Warren of the Ralph H. Jones Co. advertising agency.

District Managers

L. J. Schurr L. W. Heinlen

* * *

United Refrigerator Co. Appoints Schurr, Heinlen

ST. PAUL—Appointments of L. W. Heinlen and L. J. (Bud) Schurr as district managers have been announced recently by United Refrigerator Co., manufacturer of commercial coolers.

Schurr, formerly with the Commercial Appliance Co., Greensburg, Pa., will have the West Coast territory, including California, Oregon, western Washington, Nevada, and Arizona, according to the company.

Heinlen's territory will include North Dakota, South Dakota, Montana, eastern Washington, Idaho, Wyoming, Colorado, and New Mexico. He was formerly West Coast representative for Brunswick Blue Flash refrigerators. Prior to this he was associated with R. Cooper, Jr. Co., Chicago, for 18 years.

New Distributor Inspects '48 Shelvador

Jack H. Ryall of Peninsular Distributing Co., newly appointed Crosley distributor for the Detroit area, listens attentively as Corley W. Kirby, Crosley domestic sales manager, explains the features of one of the five new 1948 model Crosley refrigerators which have just been introduced.

* * *

5 Crosley Models--

(Concluded from Page 1, Column 5)

nouncement of price cuts ranging from 7% to 16%, after making allowance for differences in size and features, it was announced.

Price increases have been made in the Crosley gas and electric ranges, however. The DE-17, the only electric model, lists at $259.95. Last year this model sold for $249.95.

The Frostmaster frozen food locker will sell for $156.45.

Extra large storage space for frozen foods is featured on all models, 1½ cu. ft. being provided for this purpose. This is claimed to be large enough to provide three months' storage of 50 lbs. of frozen food. The compartment is enclosed by a thick bottom-hinged crystal glass which forms a convenient rearranging shelf when open.

The leader in the line, Model M-88, is the only one which has a conventional type evaporator.

"Five-way" storage spaces are featured this year. These include (1) the Freezin-Cold frozen food compartment, (2) Norm-Cold compartment with meat holder, (3) Moist-Cold food conditioner section, (4) Ever-Dry Storabin for extra dry storage, and (5) the Shelvador built-in door shelves.

A secondary refrigerating system is provided to permit high humidity for vegetables and greens, and the hermetically Electrosaver unit has also been increased in capacity, it is claimed. The unit carries a five-year warranty.

Top model in the line, the 10.5 cu. ft. SD-108, has a shelf area of 20½ sq. ft. Shelves are stainless steel and glass. The cabinet measures 65½ in. high, 33½ in. wide, and 24⅞ in. deep.

The second 10.5-cu. ft. model, the F-108, has the same cabinet dimensions and shelf area.

Each of the three 8-ft. models measures 61 in. high, 30¾ in. wide, and 24⅝ in. deep. Total shelf area in each is 15¾ sq. ft.

G-E Co-op Ad Plan--

(Concluded from Page 1, Column 5)

home freezers, ranges, water heaters, conventional and automatic home laundry equipment, dishwashers, Disposalls and electric kitchens and laundries. A percentage will be paid on all composite advertising, it was reported.

The new plan, which will run through Dec. 31, 1948, supersedes and cancels previously announced cooperative advertising plans on General Electric water heaters, Disposalls and dishwashers, Simons indicated.

Publications and radio stations having published rate cards and outdoor and car card postings, which have been approved in writing by General Electric to the distributor, constitute eligible media for cooperative advertising of G-E major appliances.

Complete media lists approved by General Electric within the past year for use in current cooperative advertising are acceptable media for advertising under the new company plan, Simons said.

Shaver Surveys Appliance Use For Northern States Power Co.

MINNEAPOLIS — Stanley Shaver, who has been in charge of the refrigeration department of the Minneapolis Division of Northern States Power Co., has been transferred to the company's Wisconsin Division where he is supervising a survey of general appliance use, it was announced by the company.

February Washer Sales 40.8% Above Last Year

CHICAGO—An increase of 40.8% was recorded for sales of standard size washers in February, according to the American Washer & Ironer Manufacturers Association. Total sales for the month were 360,029 units as compared with 255,611 sold in February, 1947. The total for January was given as 358,445 units.

Sales of small washers with a capacity of three pounds or less, were 32,312 in February, compared to 50,000 for February of 1947 and 35,862 for the preceding month of 1948, according to the association.

Ironer sales for February were given as 51,651, compared to 40,192 in January and 39,239 sold in February, 1947. This represents an increase of 31.6% over the February, 1947 total, figures showed.

Philco Sales Peak--

(Concluded from Page 1, Column 5)

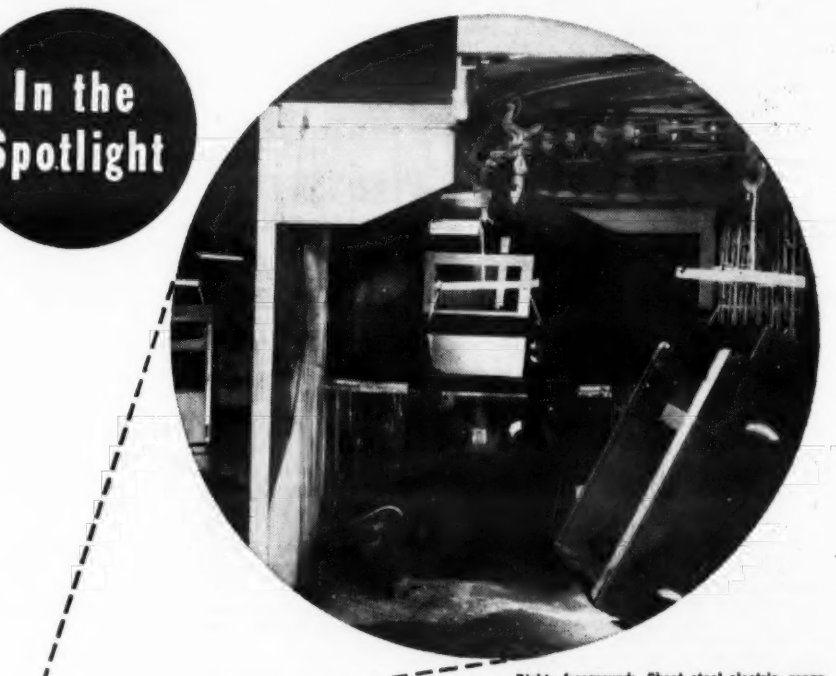
produce 3,500,000 radio and television sets and 700,000 refrigerators and freezers this year," the report declared.

Postwar expansion program of Philco has been largely completed now, say Larry E. Gubb, chairman, and John Ballantyne, president. In 1947 the company's capital expenditures were around $5,000,000, compared with $10,000,000 in 1946.

Over-all sales of the company were up 86% in 1947 as compared with 1946, and 194% ahead of 1941.

Net income for the year equaled $6.18 a share on common stock after preferred dividends.

In the Spotlight



Right, foreground: Sheet steel electric range shells entering power spray washer to be cleaned and phosphate-coated with "DURIDINE".

Left: DURIDIZED shells, well conditioned for bonding paint, leaving washer.

Photograph courtesy of Hotpoint, Inc.

Ful-Vision
DISPLAY CASE

Available for immediate delivery both self contained and remote in 4, 5 and 6 ft. lengths.

GENERAL REFRIGERATORS CORP.
MANUFACTURERS SINCE 1928
678 BROADWAY NEW YORK 12, N. Y.
GRC

Duridize FOR A LASTING PAINT FINISH ON YOUR PRODUCT

CHEMICALS ACP PROCESSES
RUST PROOFING AND PAINT BONDING
Granodine *
Duridine *
Alodine *
Lithoform *
Thermoil-Granodine *
RUST REMOVING AND PREVENTING
Deoxidine *
Peroline *
PICKLING ACID INHIBITORS
Rodine * ®

Duridizing is very effective on all metals. The process is simple to control —uses a single chemical, "DURIDINE", which combines cleaning and phosphate coating—requires only mild steel power spray washers. Duridizing is equally suited to plants operating on full scale large production; and to plants faced with intermittent production.

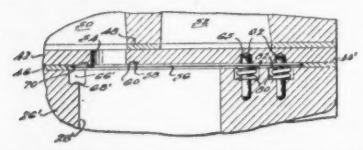
"DURIDINE" is made, sold and serviced by a pioneer in the field of rust proofing.

Pioneering Research and Development Since 1914
AMERICAN CHEMICAL PAINT COMPANY
AMBLER, PA.
Manufacturers of Metallurgical, Agricultural and Pharmaceutical Chemicals

PATENTS

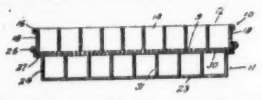
Weeks of Jan. 20 & 27

2,434,734. COMPRESSOR VALVE. Oskar H. Buschmann, Sidney, Ohio, assignor to Copeland Refrigeration Corp., Sidney, Ohio, a corporation of Michigan. Application April 6, 1945, Serial No. 586,877. 5 Claims. (Cl. 251—119.)



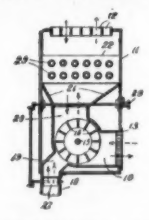
5. In a compressor mechanism, a ported valve plate marginally clamped to a cooperating part and sealed thereto but separated therefrom by the interposition of a sealing gasket therebetween, a flat resilient reed valve arranged with its plane of thickness parallel to a face of said valve plate, said reed valve having a substantially unrestricted free end portion overlying the port in said valve plate and adapted to close said port by contact with said valve plate around the margins of said port, the opposite end portion of said reed valve being confined in the space between said valve plate and said cooperating part, and spring means reacting between said part and said confined end portion only of said reed valve and firmly holding said end of said reed valve in flat contacting relationship with respect to said valve plate irrespective of the thickness of said gasket whereby the resilience of said reed valve will constantly act to urge said valve to closed position.

2,434,803. FREEZING MOLD FOR ICE STICKS. Avin Columbus Johnson and Charles C. Oliver, New Orleans, La.. Application Jan. 7, 1946, Serial No. 639,584. 3 Claims. (Cl. 62—108.5.)



3. A freezing mold for use in refrigerators comprising a resilient top tray and a resilient bottom tray, each of said trays having a bottom and side walls, transoms and partitions providing a plurality of compartments, said bottom tray including a shelf-like formation having an upstanding edge extending along said walls for seating the top tray therein and a removable plate on said shelf-like formation beneath said top tray.

2,434,847. AIR CONDITIONING UNIT HAVING A REVERSIBLE FAN WHEEL. Harold P. Hagen, Wellesley, Mass., assignor, by mesne assignments, to Westinghouse Electric Corp., a corporation of Pennsylvania. Application March 9, 1945, Serial No. 581,868. 3 Claims. (Cl. 98—38.)



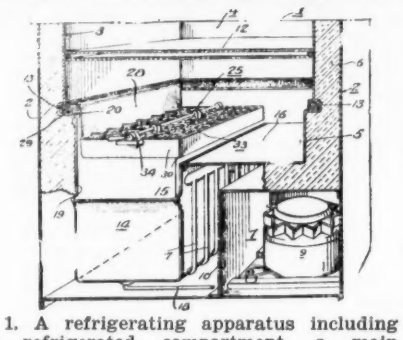
1. An air conditioning unit having an upper opening and a lower opening, a centrifugal fan in said unit, said fan having a reversible fan wheel and having a casing therearound, said casing having two peripheral openings therein, means defining an air passage connecting one of said peripheral openings with said upper opening, means defining a second passage connecting the other of said peripheral openings with said lower opening, said unit having a primary air inlet opening, said fan having a fan inlet opening between said peripheral openings, and means defining a third air passage connecting said fan inlet opening with said air inlet opening, said means isolating the air in each of said passages from the air in the others of said passages except through said fan.

2,435,034. LIQUID COOLER. Eugene F. Chisholm, Portland, Ore. Application Feb. 18, 1946, Serial No. 648,221. 1 Claim. (Cl. 62—141.)

A liquid cooler comprising an evaporator mounted in a frame and having two walls spaced apart throughout the length of the frame and sealed along both of its sides by the sides of said frame, said walls being bent alternately up and down transversely throughout their width into a series of spaced apart troughs, said evaporator being backed by heat-insulating material disposed between the back wall of the evaporator and the back wall of said frame, means for directing liquid

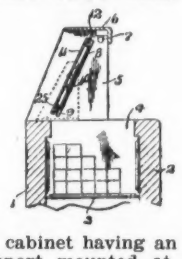
refrigerant under pressure to an inlet at one end of the evaporator, means for withdrawing gaseous refrigerant from an outlet header at the other end of the evaporator, and a heat exchanger disposed in the insulating material and including portions of the last two mentioned means.

2,435,102. REMOVABLE SECONDARY COOLING UNIT FOR REFRIGERATOR EVAPORATORS. Theodore W. Rundell, Abington, Pa., assignor, by mesne assignments, to Philco Corp., Philadelphia, Pa.



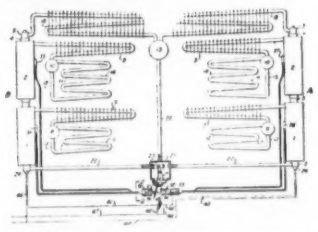
1. A refrigerating apparatus including a refrigerated compartment, a main evaporator for cooling said compartment, and a container for liquids having integral therewith a closed secondary refrigerant circuit including an evaporator portion and a condenser portion, said condenser portion being normally disposed in heat exchange relation with said main evaporator, and means for adjusting the degree of heat exchange between the secondary condenser and said main evaporator.

2,435,103. CABINET WITH COMBINED COVER AND SWINGABLE MIRROR. Clifford B. Shreve, Niles, Mich., assignor to Tyler Fixture Corp., Niles, Mich.



1. A display cabinet having an open top, a vertical support mounted at each end of the top of the cabinet, a backing member having a mirror on one face thereof mounted on and between said supports to turn about a horizontal axis, and a top cover member hingedly mounted adjacent one edge to said backing member adjacent an edge thereof, whereby the mirror backing member and said cover member may be located in parallel relation to each other and turned to position the mirror facing forwardly above said open top, or in another position to locate said cover member horizontally over the open top.

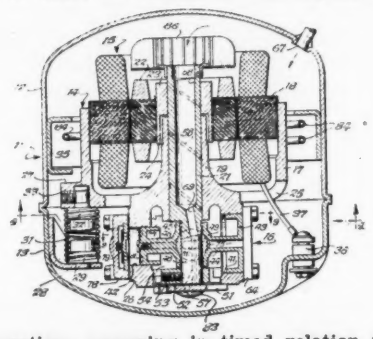
2,435,107. TWO TEMPERATURE INTERMITTENT TYPE ABSORPTION REFRIGERATOR. Otis B. Sutton, North Canton, Ohio, assignor to The Hoover Co., North Canton, Ohio.



1. Refrigerating apparatus comprising a plurality of refrigerating units each including a refrigerating part and a heat rejecting part so related to said refrigerating part that the temperature of said refrigerating part is a function of the temperature of said heat rejecting part, each of said refrigerating parts being arranged to refrigerate a space distinct from that refrigerated by the remainder of said refrigerating parts, and means constructed and arranged to maintain a differential between the temperatures of said heat rejecting parts whereby to maintain a temperature differential between said refrigerating parts.

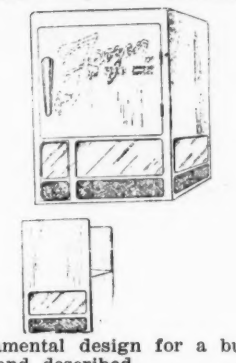
2,435,108. REFRIGERATION COMPRESSOR. Jens Touborg, Tecumseh, Mich., assignor to Tecumseh Refrigeration Sales & Engineering Co., Tecumseh, Mich.

3. A compressor having a pair of spaced cylinders, one of which is of greater diameter than the other, pistons reciprocably mounted in the cylinders and having piston rods extending therefrom, a drive shaft having an eccentric, a Scotch yoke connection between the eccentric and the piston rods, said yoke including a crosshead, fluid ducts formed in the piston rods and communicating with the cylinders, and ports formed in the crosshead of the yoke adapted to admit fluid to the larger cylinder through one of said ducts and from the larger cylinder to the smaller cylinder through the other of said ducts, said ports being so spaced as to effect said admissions as sequential



operations occurring in timed relation to the suction strokes of the pistons as they are reciprocated through the yoke.

148,466. DESIGN FOR A BUILDING. James L. Gordon, Amarillo, Tex. Application July 22, 1946, Serial No. 131,788. Term of patent 14 years. (Cl. D13—1.)



The ornamental design for a building, as shown and described.

CLASSIFIED ADVERTISING

RATES for "Positions Wanted" **$2.50** per insertion 50 words or under. 5¢ ea. additional word.

RATES for all other classifications **$5.00** per insertion 50 words or under. 10¢ ea. additional word.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other addresses by actual word count.

POSITIONS WANTED

DO YOU have a help problem? Let us solve yours. Available—well trained selective men. These men have completed a course of 34 weeks consisting of practical shop refrigeration. Send for our records. Well trained men for a good job. Available for all parts of the country. THE ST. LOUIS SCHOOL FOR ELECTRICITY AND REFRIGERATION, INC., 6767 Southwest Avenue, St. Louis, 17, Mo.

ARE YOU in need of a good serviceman? —We have a number of men available—Willing to work anywhere—Have had 34 weeks intensive shop training on all types of refrigeration. Our men are fully qualified. UNIVERSAL TRADES SCHOOL, 4030 So. 13th St., Omaha, Nebraska.

PARTS MAN: Have seventeen years experience General Motors Corporation, Frigidaire and dealer. Knowledge material control, warehousing, receiving, shipping. Familiar service dept. setup. Correspondent and expiditing orders and deliveries. Can furnish excellent references. Employed at present. BOX 2720 Air Conditioning & Refrigeration News.

REFRIGERATION ENGINEER, service, design, erection manager. Scandinavian, high technical education, 15 years experience in sales, design, erection and maintenance of domestic, commercial and ship refrigeration and partly air conditioning installations. 10 years management in one firm. Excellent references. Desire position, prefer West Coast, willing to travel. BOX 2762, Air Conditioning & Refrigeration News.

MANUFACTURERS REPRESENTATIVE would like to hear from manufacturers desiring coverage of original equipment manufacturers in Eastern Pennsylvania, South Jersey, Delaware, Maryland and Virginia Eastern shore. Twenty five years experience commercial refrigeration and air conditioning. BOX 2764, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

COMMERCIAL REFRIGERATION sales managers. Carrier Corporation requires two commercial refrigeration zone managers for positions with a good future. Applicants must have a proven record in the sale of commercial refrigeration to distributors or national users. Location South and Midwest. In reply state age, education, experience, preferred location and salary desired. Address Personnel Division, CARRIER CORPORATION, Syracuse 1, New York.

COMMERCIAL REFRIGERATION sales managers. Distributors and major dealers of Carrier Corporation products need five good commercial refrigeration managers for various locations throughout the country. Remuneration on the basis of salary plus a percentage of gross margin. Possible earnings of $8000 to $12,000 per year. In reply state age, experience and preferred location. Address Personnel Division, CARRIER CORPORATION, Syracuse 1, New York.

COMMERCIAL AND industrial refrigeration and air conditioning installation and servicemen with at least 3 years experience. 40 hour week, company trucks furnished. $1.80 to $2.00 scale. DRESCO REFRIGERATION COMPANY, 4404 Woodward, Detroit 1, Michigan.

COMMERCIAL REFRIGERATION Serviceman—For aggressive sales and service company located in Northern Ohio. Experience in commercial and air conditioning. Union wages. BOX 2750 Air Conditioning & Refrigeration News.

REFRIGERATION ENGINEER: Nationally known refrigeration manufacturer looking for refrigeration, mechanical, or electrical engineer with about five years experience in refrigeration design and development. Will pay salary commensurate with ability. Write full details of qualifications, experience, and salary expected. Enclose photos. Write BOX 2755, Air Conditioning & Refrigeration News.

SERVICE MAN wanted for aggressive sales and service company located in Alabama. In business since 1932. Must be a commercial and industrial installation and service man with at least six years experience. State previous experience and references. BOX 2766, Air Conditioning & Refrigeration News.

AIR CONDITIONING refrigeration service installation mechanic. Must have ten years' experience, tools, phone, car, good character, health, personality. Will pay top rate. Steady work, Baltimore area. Include references, pay expected. Your letter kept confidential. Write BOX 2768, Air Conditioning & Refrigeration News.

EQUIPMENT FOR SALE

DAYTON REFRIGERATORS — complete sealed units. Parts for open type Dayton units. Heinz and Munschauer factory representative. ANCHOR REFRIGERATION SERVICE, 1024 Genesee Street, Buffalo 11, New York.

FOR SALE: 60 ton Westinghouse used compressor with coils and economizers knocked down. Four American dual Centrifugal blowers 15000 CFM. 1—New 10 HP York compressor. 2—New 7½ HP York compressors. 4—New 7½ HP Universal compressors. 1—CV88 F York air unit. 1—CV 126F York air unit. THE BIMEL COMPANY, 2600 Colerain Ave., Cincinnati 14, Ohio.

SEALED UNITS rebuilt and exchanged. Prompt service on Coldspot (sealed & semi-sealed) Chieftain, Gale, Tecumseh, Norge and many others. One year guarantee. Write for price list and shipping instructions. BRIGHTON, 16640 Log Cabin, Detroit 3, Mich.

JACK & HEINTZ fractional horsepower motors. Complete line of various sizes: ⅙, ¼, ⅓, ½-110/220 AC 60 cycles; 115/230 AC 50 cycles. Available for immediate delivery. Maximum discounts. Export Dept., J. J. CONNOLLY Co., 560 West 34th Street, New York 1, N. Y. Telephone WI. 7-2100.

HERMETIC UNITS rebuilt: Westinghouse, Norge, Frigidaire, Kelvinator, Crosley, Philco, and G. E. (except Monitor top). One year guarantee, $35.00 F.O.B. No relays or controls included. DOLL & LEWIS, INC., 2331 Frederick Ave., Baltimore 23, Maryland.

NEW GENERAL Electric motors, 1½ HP. 1800 R.P.M. 230 volts 1 Ph. 60 cycle. High starting torque. Constant duty sleeve bearing. List $88 less 20%. Also in stock ⅛ to 1 HP. EDISON COOLING CORP., 310 East 149th St., New York City, N. Y.

QUALITY BOBTAIL fountains; reach-ins, walk-in boxes—wood, metal; dough retarders; double duty cases—stainless steel, porcelain; dairy, florist, bakery cases; ice cream hardening cabinets; thermopane frozen food cases; milk, sandwich coolers; stainless steel back bars; with machines. Equipment made to special order. FRIGITEMP CORP., 931 Bergen St., Brooklyn 16. MA 2-9093.

GOTTA MOVE this stuff. Here is what it cost, make an offer for all or part of it. It is all new. Schnacke F compressor, base and drive $700. Servel WXT300 condensing units 2 at $425. Kramer Trenton Thermobanks model TV 275, 4 at $375. American Recording Thermometers 4 at $77. (2 to crate). York doors 3' by 6'6", 4" corkboard 4 at $86, 3'6' by 8'2" Track door $124. 10 HP Allis Motor, 220-440-3-60-1750 $115. C. A. GEIST, 3515 Paseo, Kansas City 3, Mo.

FOR SALE: 130 Henry type 542 relief valves, ⅝ ODS connections, list price $20.00. Will sell in lots of 12 at $9.50 each, lots of 24 or more $8.75 each, F.O.B. York, Pa. 26—#674 Detroit Thermostatic expansion valves, none adjustable, ⅜" and ½" flare connections. List $15.80. Will sell all at $4.90 each. F.O.B. York. GOODLING ELECTRIC CO., INC., 335 West Market St., York, Pa.

FOR SALE at reduced prices, 2-tap all stainless steel direct draw boxes complete with blowercoil $275. F.O.B. Chicago, Illinois. 3-tap all stainless steel direct draw boxes complete $340. GEORGE HILGER CO. INC., 8444 So. Racine, Chicago, Illinois.

ELECTRIC WATER coolers. Bottle type, used, in good running condition. Standard make. Attractively priced. One to ten, $50.00 each. Ten or more, $45.00 each. Twenty-five or more $40.00 each. F.O.B. your plant. HINCKLEY & SCHMITT, 420 W. Ontario St., Chicago 10, Illinois.

SYRUP PUMPS, highly streamlined. All stainless steel. Can be completely disassembled for cleaning. Passed by the Los Angeles City Board of Health. Available with rectangular or oval lids. Franchises available for fountain manufacturers, parts jobbers and distributors. Your inquiry invited. KELLER MANUFACTURING CO., 2425 Eads Street, Los Angeles 31, California.

CHRYSLER AIRTEMP compressor, radial type Model ACR-25 equipped with 40 H.P., 60 cycle, 3 phase, 220/440 volt Century squirrel cage induction motor, Allen-Bradley starter and Bulldog Safety switch. Equipment in running condition. Out of service only a few months. Inspect or inquire at MATESICH DISTRIBUTING AGENCY, 135 Wilson Street, Newark, Ohio, Phone 6632.

3 HP CARRIERS $310. 5 HP Mills $395. 50 HP Schnacke less motor $1195. 5 HP McQuay & Typhoon Weathermakers $395. ¾ & 1 HP Amco Weathermakers $175 & $195. 15 HP Larkin Evaporative Condenser $795. The following less motors: ½ HP Crew & ¼ HP Copeland units $39 each; ⅓ HP Universals $49 each. All new crated. PILGRIM REFRIGERATION CO., 48-20 43rd Ave., L. I. City, N. Y.

SEALED CROSLEY terminals. Installed from the outside in a few minutes without opening the compressor or removing unit. No special tools needed. Stops leaky terminals on "F-12" units. Part # 1020 short model—for short Crosley terminals ("F-12" compressors with 4 mounting legs.) Part #1020 long model—for long Crosley terminals ("F-12" compressors with 3 mounting legs). $5.25 set of three. Immediate delivery. Money-back guarantee. SEALED UNIT PARTS CO., 3097 Third Ave., New York 56, N. Y.

SEVERAL NEW continuous ice cream freezers 15 gal. and 25 gal. per hour capacity complete with refrigeration units. Make either ice cream or frozen custards. TAYLOR FREEZER SALES CO., 1553 Broadway, N. Y. 19, N. Y.

COMPLETE SEALED units ⅛ H.P. for sale. Condensers are fan cooled. Complete with relay and charging valves $45.00. Lots of 10, $40.00 each, F.O.B. New York. Dimensions are 18" long, 15" wide, 11" high. TECHNICAL REFRIGERATION SPECIALIST'S, 362 East 180th Street, Bronx, N. Y.

KOLD-HOLD PLATES (18" x 60"). Manufacturer's surplus. Three hundred and ninety-three (393) at $8.00 each. UNITED REFRIGERATOR COMPANY, St. Paul 1 Minn.

"PRICED FOR immediate disposal." 4—2 H.P. water cooled Universal units with single or 3 phase motors, $290.00. 8—3 H.P. water cooled Copelands single or three phase, $305.00. All units are new and in original crates. Write BOX 2771 Air Conditioning & Refrigeration News.

BUSINESS OPPORTUNITIES

DISTRIBUTORSHIP OPENINGS in principal Mid-Western cities for Perfection Zero-master Home Freezers, Kelvinator sealed, 5 yr. food spoilage insurance. Sizes 10, 18, and 26 cubic feet list at $398.50, $518.50, and $633.50. Also factory representative positions available Michigan, Indiana, and Ohio. ROBERT TISCH, Zone Supervisor, Williamston, Michigan.

FOR SALE—Established refrigeration business in Indianapolis. 16 years in same location. Definitely a good income for one or more men. Plenty of up-to-date equipment. Priced for quick sale as owner is retiring and moving to Florida. BOX 2760, Air Conditioning & Refrigeration News.

DO YOU want to sell your refrigeration business? We want to buy: Long established commercial, domestic and air conditioning sales and service business, including inventory, stock of parts and supplies. Year-around business and good location essential, preferably West Coast. Give full particulars in answering. BOX 2761 Air Conditioning & Refrigeration News.

FOR SALE: commercial refrigeration display room, warehouse, home. Well rated in Miami, Florida. Life time opportunity. BOX 2765, Air Conditioning & Refrigeration News.

COMMERCIAL REFRIGERATION business, established for the last ten years at present location, handling nationally known refrigeration equipment—three trucks on the road, and doing approximately $40,000 a year business. Complete present inventory approximately $17,000. Present building valued at $10,000. No mortgages or debts against building or business. Reason for selling—retiring from business. For further information write P. O. BOX 382, Easton, Pa.

REFRIGERATION ENGINEER WANTED

by established commercial equipment manufacturer. Experience necessary. Must understand psychrometic calculations, balance machines and coils, specify valves, controls, etc. Must be able to conduct laboratory tests and analyze results. Permanent position for qualified man. Location Indiana. Write Box 2767, Air Conditioning & Refrigeration News.

SALESMAN

Wholesale distributor of nationally advertised household appliances is seeking services of alert young man who is aggressive and capable of managing a territory in Missouri and Illinois. Excellent opportunity.

Box 2769, Air Conditioning & Refrigeration News

Subscribe Now

Receive the greatest trade paper in the Industry—AIR CONDITIONING & REFRIGERATION NEWS. Published every week. Brings you latest news and vital information on household refrigeration, commercial refrigeration, air conditioning, home freezers; manufacturing, distributing, retailing, servicing, and contracting. Only $5 per year, 52 issues.

Fill in coupon and mail today

AIR CONDITIONING & REFRIGERATION NEWS
450 West Fort Street, Detroit 26, Michigan

Gentlemen: Send the NEWS for one year.

☐ $5 enclosed ☐ Bill me ☐ Bill the company

Name.....

Company.....

Street.....

City.....Zone.....State.....

4-12-48

At the Annual Conference of Canadian RSES

Much to the surprise of E. G. "Punch" McCracken, who retired after six years' service as secretary of the Interprovincial Association of the Refrigeration Service Engineers Society, the group quietly proposed him for president.

In the front row here are (left to right) J. M. Turner, second vice president; G. M. Olmstead, first vice president; McCracken; R. G. Henderson, secretary; T. A. Tran, treasurer, and H. LaFlamme, sergeant-at-arms. Back row: H. Donnell, educational chairman; C. W. Moore, director; Al Pike, retiring president; and Directors John Roberts, T. E. Andow, W. Podd, and Dewey Hamilton.

Other directors elected included Murray Dickie, P. E. Palmer, A. Gendron, R. Brault, W. Lowry, C. G. Heilig, H. J. Brough, Frank Chance, F. G. Dowle, W. H. Dowling, J. E. McKenzie, A. M. Campbell, and A. G. Smail.

An important part of any convention (and a very pleasant one, too) is the cocktail hour. At the Toronto RSES meeting, Universal Cooler of Canada, Ltd., took this opportunity to honor Al Pike, president of the Canadian RSES group and district manager for Universal in the Maritime provinces. Here are Pike, Phil Hedrich, general sales manager for U.C. of Canada, Mrs. Pike, and Dan Robertson, president of U.C. in Canada.

This scene could have been shot in any hotel room at any convention, it's that typical, we think. Here in Toronto while E. G. McCracken (center) gives some inside dope to the ubiquitous Ed Graff of Ranco in the presence of G. Condie (left), IPA treasurer, Parts Wholesaler Alec Dawson is completely involved in his own thoughts and Jack Ross, also a wholesaler, unconcernedly catches up on his reading.

DISTRIBUTORS REFRIGERATION-HEATING PARTS AND SUPPLIES

We carry a stock to fill large and small orders. Fully equipped to handle export shipments.

Automatic

HEATING & COOLING SUPPLY

DIVISION OF WEIL-McLAIN COMPANY

647 W. Lake St., Chicago 6, Ill.

Branch—809 West 74th St., Chicago, Ill.

March 1, 1948 Discount Sheet and Supplement Mailed on Request.

PROFITS

. . . are the rewards from efficient management . . . aggressive sales efforts . . . sound advertising . . . customer good will.

Serving the Refrigeration Industry Exclusively

C.R. MARKHAM Advertising

ADVERTISING INTELLIGENTLY PLANNED • EXPERTLY PREPARED • PROPERLY PRODUCED

National Security Bank Building

767 Milwaukee Ave., Chicago 22, Ill.

insist on genuine

Marlo

products

MARLO-HEAT TRANSFER

Since 1925

Norge Gets Step-up on Heating Unit Production With New Facilities

HAMMOND, Ind.—Output of heating equipment from the company's newly acquired plant here probably will begin at least 30 days earlier than originally anticipated as a result of rapid machinery installation progress, according to C. S. Davis, Jr., vice president and general manager of the Norge Heat division of Borg-Warner Corp.

In the original announcement of the plant purchase, made at the end of February, it was estimated that production would begin by midsummer. Now it appears, according to Davis, that manufacturing may start by the end of May, provided work continues at its present rate. Meanwhile, the company will continue to make shipments of Norge Heat furnaces from Kalamazoo.

Discussing manufacturing plans, Davis disclosed that the company, initially, will concentrate its attention on the recently announced new "convertible" winter air conditioning furnaces and a new "gun-type" oil burner which operates efficiently with all standard grades of straight-run distillate or catalytic stock fuel oils.

However, acquisition of the 150,000 sq. ft. plant, previously owned by Pullman-Standard Car Mfg. Co., will make possible later production of the full line of Norge Heat products. These include several models of fully automatic vacuum-draft, oil burning, winter air conditioning furnaces, together with floor furnaces, coal furnaces, and oil-burning water heaters.

Commercial Sales Group President Visiting 23 States

MINNEAPOLIS — William C. Bader, Tulsa, Okla., president of the National Commercial Refrigerator Sales Association, left the national office here March 29 for a two-month tour of the South to organize local refrigeration distributors associations into chapters of the NCRSA.

The NCRSA has member organizations in 23 states, 17 of which are below the Mason-Dixon line. North Carolina leads the South with the largest number of local groups. The Raleigh association alone has 32 members.

From the national headquarters here R. H. Muehlberg, executive secretary, explained that Bader will visit Memphis, Tenn., Nashville, Tenn., New Orleans, Jackson, Miss., Atlanta, and Jacksonville, Fla., during his southern tour.

He added that the NCRSA president, in addition to getting local groups to join the national organization, will urge distributors in cities and towns without associations to band together.

233,500 Missing 'Freon' Cylinders Peril '48 Supply

CLEVELAND — Prospects of severely cut "Freon" allocations during the coming spring and summer seasons unless "Freon-12" cylinders are returned promptly to Kinetic Chemicals, Inc. were forecast for the industry in a letter written by R. J. Thompson, Kinetic director of sales, and received by the National Association of Refrigeration Contractors.

In his letter, Thompson described Kinetic's desperate need for cylinders as follows:

"There are now away from our plants 233,500 cylinders up to the 145 lb. size all of which have been shipped in the immediate past.

"These cylinders have a capacity of 22,500,000 lbs. of 'Freon-12' which means there is that amount of 'Freon-12' in the field operations in stock, storage, or standby, or that the cylinders are empty and are not being returned promptly for refilling, or some of both.

"Deposits paid on these cylinders and which are available for refund amounts to $3,000,000.

"Cylinder capacity lost (shipments exceeding return of empties) in 1947 was 7,000,000 lbs. of 'Freon-12' and cylinder capacity lost in January of 1948 is 655,000 lbs. of 'Freon-12.'

"New cylinders obtained in January, 1948 from manufacturers, dismantled Maritime Commission ships, W.A.A., and other sources will hold but 188,000 lbs. of 'Freon-12' and can be loaded and shipped in less than three days.

"Additional cylinders for shipping purposes cannot be obtained in sufficient quantities to match the rate of disappearance due to unavailability of sufficient steel.

"Cylinders now on order have a shipping capacity of 8,130,000 lbs. of 'Freon-12,' but deliveries are not expected for many months on account of shortage of steel.

"Allocations must be severely cut and shipments will be in line only with number of empty cylinders returned, which, in turn, regulate the production of 'Freon-12' in our plants and when production is lost it is lost forever, or causes considerable delay in installing or servicing equipment.

"To correct this situation and promptly before the spring and summer seasons hit the industries:

"1. Return all empty KC INC cylinders to Carney's Point, N. J. now.

"2. Transfer 'Freon-12' now in stock or storage from cylinders into refrigerating or air conditioning equipment now, and return those empty cylinders to Carney's Point for refilling and further shipment.

"3. Keep cylinders in circulation in this country.

"4. Distribute 'Freon-12' wisely to your customers where the greatest need exists."

In presenting Thompson's letter to its membership, the NARC urged cooperation of all members.

Join Forces with National Association

Seated around the table in the Sheraton Hotel, Chicago, are 18 members of the Chicago Commercial Refrigeration Distributors' Association who voted to join the National Commercial Refrigerator Sales Association at a recent dinner meeting. Clockwise, beginning with the head of the table at the far end, are Frank Murphy of McCray Refrigeration Co., president; E. J. Matot of D. A. Matot Inc.; Frank C. Janas of Haskris Refrigeration Co.; Lee Marx of Marx Store Fixture House; Irvin Marx of Marx Store Fixture House; Walter McCarty of McCarty Bros. Equipment Co.; David Greenwald of Diversey Store Fixture Co.; Frank Haas, of Haskris Refrigeration Co.; James Paulaki of Randolph Refrigeration & Equipment Co.; Jerry Chilson of Talbert Thomas Co.; Roy W. Brazda of Evercold Refrigeration Equipment Co.; I. J. Kristofek of Talbert Thomas Co.;' William Shell of Lee Shell Co.; Joseph H. Lazer of Refrigeration Systems; Fred M. Schulz of Weber Showcase & Fixture Co.; W. H. Sudekum of Hussmann Refrigeration Co.; Irving W. Shell of Lee Shell Co., secretary-treasurer; and R. H. Muehlberg, executive secretary of the National Commercial Refrigerator Sales Association.

Van Cleave Moves from Mississippi To Alabama

VICKSBURG, Miss. — Foster Van Cleave, owner of the Van Cleave Refrigeration Co. here, has sold the business to Mr. and Mrs. J. E. Collins, and will go to Birmingham, Ala., to accept a distributorship for the Ed Friedrich Sales Corp.

ATTENTION!-Wholesalers, Manufacturers, Contractors & Service Men!

PRICES REDUCED FOR IMMEDIATE SALE

We Must Move the Following Items, Which We Are No Longer Listing As Stock Items, In Order To Make Room For Regular Lines. This Is Not A Money-Raising Scheme; Lack of Space Makes These Savings Possible For You! Substantial Quantities of All Items.

UNIT COOLERS

	Cap. @ 15°T.D.	Clearance Price
OC-58 American Coil "Open Face Blowers"	6600	$ 56.00
OC-128 " " " " "	13500	100.00
OC-168 " " " " "	19500	120.00
RI-15 " " Panel "	1750	30.00
RI-20-S " " " "	3100	45.00
RI-25 " " " "	1975	32.00
RI-30 " " " "	2700	42.00
#66 Elpeco Blowers (Spine Fins)	4800	49.25
#85 " " (" ")	6200	57.75
#113 " " (" ")	8200	68.25

CONDENSING UNITS (Complete With Motors)

¼ H.P. Heavy Duty Internationals (Chieftain Compressor)	$ 80.00
¼ H.P. Close Coupled Pars (CC-2)	66.75
⅓ H.P. " " " (CC-3)	74.87
⅓ H.P. " " Elpecos (Chieftain Compressor)	60.00
⅓ H.P. Medium Duty Lehighs (AM4-F)	92.00
½ H.P. Elpecos (Chieftain Compressor)	90.00
1 H.P. Pars Air Cooled, 1 PH (HA-10-S)	205.00
3 H.P. Universals Water Cooled 3 PH	310.00

FREEZER PLATES

12" x 30" Yoder Plates	$ 4.00
12" x 84" Stangard Plates	12.20
12" x 108" " "	15.68
22" x 72" " "	19.17
22" x 108" " "	28.74

MISCELLANEOUS

#A11139 ½" Solder 2-Way Packed Shut-Off Valves	$ .65
#2590 Gates Belts 59" Length, "A" Width	.60
#2900 " " 90" " " "	.82
#2920 " " 92" " " "	.84
#12230 4 Tray Kelv. Evaporators	17.85
#49037 Single Cylinder Kelv. Compressors	22.06
#1049070 Twin " " "	26.78
⅜" O.D. x 50' Soft Aluminum Tubing per 50' roll	2.95
½" O.D. x 50' " " " " " "	3.51
#324 Polar Walk-In Cooler Locks	6.25
#1FCS Arcade " " Hinges Per pair	4.50
1" x ½" Black Ammonia Ells	.35
¾" x ½" Rustproof " "	.30
1" x ¾" Black " "	.35
1" " " Nipples	.14
1¼" " " "	.16
¼ H.P. Liquid Receivers	1.65
⅓ H.P. Air Cooled Condenser 3 Row	2.00
Ice Cube Trays, 11¼" x 4⅜" x 1⅜6" (Enamel Finish)	.25
" " " , 13¾" x 4¾" x 1⅜6" (Aluminum)	.45
" " " , 7" x 5" x 1⅜6" (" ")	.35
#32 6-Tray Ice Cube Makers (with trays)	24.50
#42 8- " " " " (" ")	29.30
¾" FPT Ammonia Globe Valves	4.95
L480B Minn-Honeywell Thermostats (−20 to +20)	4.95

All Items Brand New and Majority In Original Crates

All Items Subject to Prior Sale; 2% on Cash with Orders or SDBL Shipments. 2%, 10 days to Rated Companies—Freight Prepaid on Orders Over $1,000.00.

Box No. 2770

AIR CONDITIONING & REFRIGERATION NEWS

Electric Range Has 'Jet Metal' Top

The electric range top on the Westinghouse "Champion" model, shown at left, is partly manufactured from Titanium steel—a metal now used in jet plane engines to withstand extreme heat. Price of the "Champion" is $299.95 and covers, among other things, a "True Temp" oven, a utility oven, built-in timer, and a deepwell cooker.

Buffalo Forge Names Whiting Vice President

BUFFALO — Herbert S. Whiting, secretary of the Buffalo Forge Co. for nearly 20 years, was elected a vice president of the company at the recent annual meeting of the board of directors. He will continue to serve as secretary, however.

Whiting started with Buffalo Forge as a traffic clerk and later served in various departments. He studied law and finance evenings and in 1924 was made a director of the company. Two years later he became assistant secretary and in 1929 was named secretary.

All other officers of the company, as well as the directors, were re-elected.

Consumer Credit Volume Continues January Slump

WASHINGTON, D. C.—A drop of $117 million in consumer credit volume for the month of February was noted in a Federal Reserve Board report made public recently. This is the second consecutive month in which a decline has been recorded.

Seasonal factors were cited by the survey as the chief reason for the slump. A $27 million decline on instalment buying of appliances and furniture was one of the items listed as involved in the drop.

Charge accounts dropped $185 million. Loans repayable in lump sum slipped $3 million to a total of $2,710 million the board figures indicated.

The February decline lowered total credit outstanding for retail transactions to $12,929 million, or $453 million below the all-time high reported at the end of December.

Dept. Store Sales Rise 17% over Volume In 1947

WASHINGTON, D. C. — A 17% rise in department store sales was reported for the week ended March 27 over the corresponding week last year by the Federal Reserve Board.

Specialty store sales in New York City were reported 7% above the same week last year, while department store sales rose 9%.

Percentage gains for the week in the various districts ranged from 8% in the Richmond area to 25% in the Dallas district. None of the districts reported a drop for the week.

The index for the week ended March 27 without seasonal adjustment was 331 compared to 283 for the similar week of 1947, according to the figures.

Mayfield Is Kelvinator Asst. Zone Manager In Southeast

DETROIT — William C. Mayfield has been appointed assistant southeastern zone manager for Kelvinator, with headquarters at Atlanta.

Mayfield joined Kelvinator in 1937 as sales representative, serving in Detroit and in the Chicago zone until 1942, when he resigned to enter the U. S. Army. After 36 months in the Pacific theater of the war, he returned to Kelvinator in 1946, and since then has been assistant sales manager of the Leonard Division.

NEWA Convention--

(Concluded from Page 1, Column 3)

vice president of Westinghouse Electric Supply Co., New York; Herbert Metz, district manager of Graybar Electric Co., Inc.; W. G. Peirce, Jr., president of Peirce-Phelps, Inc., Philadelphia; and Benjamin Gross, president of Gross Distributors, Inc., New York.

One of the two panel discussions to be held May 6 and 7 during Appliance Division sessions will represent rural markets, major appliances, small appliances, and legislative committees. The other will represent radio, television, and tubes, service and repair parts, sales promotion and sales training, store management, and store arrangement committees.

Panels during the Apparatus and Supply Division sessions May 3 and 4 will represent the following committees: (1) industrial and commercial lighting, lamp, residential lighting fixtures, fan and ventilating; and (2) apparatus and control, industrial electronics, wires and cable, and armored conductor, conduit fittings and boxes, wiring devices, rural markets, outside construction materials, and conduit.

Two of the speakers to address the convention will be R. C. Cosgrove, vice president and general manager of Crosley Division, Avco Mfg. Corp., and L. E. Osborne, vice president of Westinghouse Electric Corp.

Cosgrove, who is a past president of the Radio Manufacturers Association, will give the keynote address at the first Appliance Division session May 6. His subject will be "The Present and Future of the Radio, Television, and Appliance Business."

Osborne will be the principal speaker at the first session of the Apparatus and Supply Division May 3. At this same session, J. J. Kaske, chairman of the warehousing committee, will present what is described as an unusual feature, a special presentation of materials handling equipment.

Other guest speakers will be J. M. McKibbin, assistant vice president of Westinghouse Electric Corp., and H. U. Mann, of H. U. Mann Co., Chicago. McKibbin will speak on "How to Train the Wholesalers' Salesmen" and Mann on "Demonstrate to Sell."

At the general session May 5, problems involved in labor relations of electrical wholesalers will be presented by Kendall B. DeBevoise, NEWA counsel, on behalf of the association's newly-formed personnel and labor relations committee.

This session will also hear an address of welcome by Mayor Bernard J. Dowd and a talk on "The Art of Living" by Dr. Norman Vincent Peale, minister of Marble Collegiate Church, New York. "The New America," a motion picture produced by *Life* magazine, will be an added attraction closing the general session.

A meeting of the present board of governors and executive committee will be held May 2 and a luncheon meeting of the new board May 5, after which results of the election of officers will be announced. The annual dinner and entertainment will be held that evening at the Town Casino.

"Distributor Management Looks Ahead" has been chosen as the theme of the convention, which is expected to be attended by more than 1,000 persons.

Gamble-Skogmo Racks Up All-Time Sales Record, But Net Income Declines

MINNEAPOLIS—Highest sales in the 23 years company history were reached in 1947 by Gamble-Skogmo, Inc., and subsidiaries, merchandise organization supplying over 2,200 retail outlets, it was revealed in the firm's 20th annual report. The net sales volume of $145,167,911 was 14% over the 1946 figure of $127,335,817.

Net income declined to $2,245,558 in 1947 from $6,778,850 in 1946. Income per share of common stock was $.91 in 1947 compared to $2.78 for the previous year.

In their annual letter to stockholders, the company's founders, B. C. Gamble, chairman of the board, and P. W. Skogmo, president, explained the decrease in earnings stemmed primarily from three factors:

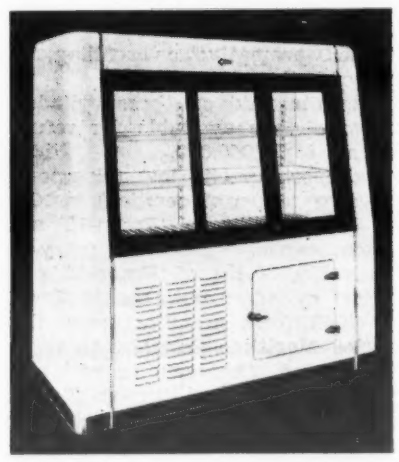
"1. Unusually heavy inventory markdowns taken because of changing merchandising conditions during the first half of 1947, sales in connection with the inventory reduction program, and experiments with new merchandising programs. The amounts were far greater in relation to sales volume than previously experienced by the company and were abnormal to the extent of reducing income before income taxes approximately 3% of sales. It is expected that lower costs of distribution and increased profits will result from some of the experiments.

"2. Extraordinary expenses in connection with a sizable expansion program involving the establishment of several large shopping centers, farm stores, enlarging existing company stores, and one new warehouse.

"3. Increases in salary and wage costs in relation to sales."

Speaking of merchandising inventories, Gamble and Skogmo said, "Satisfactory progress was made during the year in the balancing of stocks, and forward commitments were reduced and are now on a normal basis in relation to expected sales." Inventory at year's end stood at $36,802,615 compared to $40,998,957 a year before.

New Self-Contained Dairy Case Produced by Coldin



* * *

THE BRONX, N. Y.—A self-contained wall dairy case, making available as a package unit a cabinet that would normally have to be installed as a remote installation, has been developed and announced by the Coldin Cabinet Co., Inc. here.

The case, called the model SCS-6-8-10, uses a heavy-duty coil on top and a smaller booster coil over the storage compartment to maintain normal refrigeration temperatures.

Louvres in the front of the cabinet and an open back provide air circulation for the condensing unit.

January Electric Range Shipments Drop Slightly

WASHINGTON, D. C. — January electric range shipments were somewhat below those for December in both the standard and apartment types, the National Electrical Manufacturers Association has announced.

During the first month of the year, 90,626 standard units valued at $10,744,535 were shipped, as compared with 91,706 units valued at $11,700,945 for December. A total of 14,204 apartment types valued at $986,000 were moved in January while 18,142 units valued at $1,057,271 were shipped in December.

TIME TO READ
. . . . Five Unusual Books for gifts and for yourself
ONE FOOT IN THE DOOR
by GEORGE F. TAUBENECK
Author of "Let's Go to Australia," etc.
The first humorous book on merchandising. You will laugh—learn—profit while you relax with this popular book for businessmen. 400 entertaining, laugh-provoking pages. Immensely enjoyable, as thousands of readers will testify. A best-selling business book. $3.00
It Happened in Detroit
H. C. L. JACKSON
Dean of Detroit columnists
Over 200 stories, anecdotes and heartwarming vignettes of everyday happenings in the lives of the friendly, real folks who make up the real Detroit—told by this master story-teller in his inimitable manner. Pleasant, easy reading for anyone anywhere. $2.50
ALFRED STREET
by RUSSELL McLAUCHLIN
Noted music and drama critic, journalist
Delightful and nostalgic remiscences of a boyhood in kindlier times, which will conjure up familiar scenes and rich experiences of your youthful days along the "Alfred Street" of your home town. Beautifully printed and illustrated in two colors. A gift anyone will treasure. $2.50
A Conjure House Two-Story Book by Wanda Cheyne
NECTAR and OOLIE
NECTAR the Giraffe
Here is a beautiful five-color children's book with delightful stories and pictures all children from 2 to 7 will love! Printed on heavy paper . . . expensively bound to withstand the hard, strenuous usage of children at play. An ideal present for a child. Only $1.00
OOLIE the Owl
England Under G.I.'s Reign
by WILLIAM A. BOSTICK
Ex-G.I., author and outstanding artist
. . . Big Ben . . .
Over 150 delightful "on the spot" pen-and-ink drawings—each one supplemented by the author's own amusing commentary. Foreword by John Mason Brown. Every ex-G.I. and anyone who has been to England will especially enjoy this book. $2.00
ORDER TODAY . . USE THIS COUPON!
PLEASE SEND ME THE FOLLOWING:
..... Copies of "One Foot in the Door" ..... copies of "It Happened In Detroit" ..... copies of "Alfred Street" ..... copies of "Nectar and Oolie" ..... copies of "England Under G.I.'s Reign"
☐ Check enclosed ☐ Please bill me
NAME .....
FIRM .....
ADDRESS .....
conjure house
BOOK DIVISION OF BUSINESS NEWS PUBLISHING CO.
450 WEST FORT ST.
DETROIT 26, MICH.